

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 1-14								
		<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:								
Contract Number EP-C-16-003	Contract Period 07/01/2016 To 06/30/2021 Base                      Option Period Number    1	Title of Work Assignment/SF Site Name Priority Permits and Backlog								
Contractor EASTERN RESEARCH GROUP, INC.		Specify Section and paragraph of Contract SOW See PWS								
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance  From 01/25/2018 To 06/30/2018								
Comments:										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
07/01/2016 To 06/30/2021										
This Action:										
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee				LOE:		
Cumulative Approved:				Cost/Fee				LOE:		
Work Assignment Manager Name Jackie Clark							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Project Officer Name Tangela Cooper							Phone Number: 202-564-6582			
_____ (Signature)							_____ (Date)			
Other Agency Official Name							FAX Number:			
_____ (Signature)							_____ (Date)			
Contracting Official Name Brad Heath							Branch/Mail Code:			
_____ (Signature)							1/25/2018 (Date)			
							Phone Number: 513-487-2352			
							FAX Number:			

**PERFORMANCE WORK STATEMENT  
CONTRACT EP-C-16-003  
WORK ASSIGNMENT 1-14**

**TITLE:** Priority Permits and Backlog Tracking and PMOS Operations and Maintenance

**WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (WACOR):**

<b>Jacqueline M. Carroll Clark</b> <b>Phone:</b> 202-564-6582 <b>Fax:</b> 202-564-9544 <a href="mailto:clark.jackie@epa.gov">clark.jackie@epa.gov</a>	<b><u>USPS Mailing Address</u></b> Mail Code 4203M 1200 Pennsylvania Ave Washington, D.C. 20460	<b><u>Courier Address</u></b> 1201 Constitution Ave Washington, D.C. 20004
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**ALTERNATE WORK ASSIGNMENT CONTRACTING OFFICER'S  
REPRESENTATIVE (ALTERNATE WACOR):**

<b>Elizabeth Ragnauth</b> <b>Phone:</b> 202-564-3161 <b>Fax:</b> 202-564-9544 <a href="mailto:ragnauth.elizabeth@epa.gov">ragnauth.elizabeth@epa.gov</a>	<b><u>USPS Mailing Address</u></b> Mail Code 4203M 1200 Pennsylvania Ave Washington, D.C. 20460	<b><u>Courier Address</u></b> 1201 Constitution Ave Washington, D.C. 20004
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**PERIOD OF PERFORMANCE:** January 25, 2018 through June 30, 2018

**BACKGROUND:** EPA is responsible for development and implementation of the National Pollutant Discharge Elimination System (NPDES) permits program. This program regulates point source discharges of pollutants to surface waters of the United States. In 46 States and 1 Territory, this responsibility is held by authorized State and Territorial governments. EPA, through its Regional offices, issues permits for non-authorized States and for certain categories of permits (e.g., facilities located on tribal lands) in authorized States. Permitting authorities issue individual or general permits for facilities. These permits implement the requirements of the NPDES Program along with other applicable laws and regulations.

The Water Permits Division (WPD), within the Office of Wastewater Management (OWM), is responsible for implementation and oversight of the NPDES permits program. Some of WPD's oversight functions include tracking the status of permits, implementing programs that prioritize permits, and developing management tools.

In 1998, the Office of the Inspector General (OIG) identified the backlog of NPDES permits as a management weakness. One of the key problems facing EPA was the lack of reliable information in its Permit Compliance System (PCS) on the numbers of facilities. Starting in late



1998, EPA began tracking the universe of individual permits and their status using PCS and continues to track permit status as part of its oversight activities. In 2013, the transition of all states to a new database, the Integrated Compliance Information System (ICIS-NPDES), was completed.

Because ICIS-NPDES still lacks a complete universe of permittees, particularly general permit covered facilities, and cannot easily identify tribal permits, EPA uses the Permit Management Oversight System (PMOS) to manage this data. PMOS enables EPA to track general permits and tribal permits at a summary level. That is, PMOS captures limited information on these permits to enable EPA to track the universe and status of these permits.

On March 4, 2004, EPA's OWM established the priority permit initiative under the Permitting for Environmental Results (PER) Strategy. Each year, State and Regional permitting authorities have been provided with a list of candidate priority permits. From this candidate list, States and Regions are asked to select priority permits based on programmatic and environmental criteria and commit to issuing a portion of these permits over each fiscal year. This process entails developing the candidate list and loading it onto PMOS, which is designed to manage the designation and tracking of priority permits.

EPA requests contractor support to help track and analyze the data used to characterize the health of the NPDES program, including the management of PMOS.

## **PURPOSE AND OBJECTIVE**

During the period of performance, the contractor, under this Work Assignment, will support OWM/WPD for the following permit management activities:

- Generate permit backlog reports
- Support EPA's management of the priority permits process
- Maintain and, if needed, provide development services for PMOS to manage priority, tribal, and general permits
- Provide ad hoc support related to queries on backlog, priority permits, and other permit tracking activities

The contractor will ensure compliance with Agency standards.

## **SCOPE OF WORK**

### **TASK 0: WORK ASSIGNMENT MANAGEMENT**

The contractor shall routinely provide performance updates, estimated costs, level of effort (LOE) and key deliverables upon request from EPA's Work Assignment Contracting Officer's Representative (WACOR) and/or Alternative WACOR for all ongoing tasks. Regularly scheduled bi-weekly conference calls and in-person meetings, as needed, will be coordinated between EPA's WACOR and the contractor to discuss the work assignment and progress of tasks. In addition, the contractor shall provide a monthly progress report that includes

implementation plan(s); issues encountered and lessons learned regarding the progress of all tasks, the tracking of expenditures, and any other administrative activities, as requested.

**Deliverables:** The contractor shall provide a monthly progress report that will include the labor hours and cost expenditures by individual subtasks, issues encountered, and lessons learned regarding the progress of all tasks, the tracking of expenditures, and any other administrative activities. The contractor shall report by the 15<sup>th</sup> of each month. The contractor shall maintain a cumulative list of all technical directives. The contractor shall notify the EPA CO and WACOR and/or Alternative WACOR in writing of expenditure reaching 50%, 75%, and 90% of the authorized LOE/labor hours. The contractor shall report in accordance with Contract Reporting Requirements.

Deliverables		Due Date
1	QAAP based on this PWS	Within 10 days of Work Assignment approval
2	Monthly progress report that will include the labor hours and cost expenditures by individual subtasks, issues encountered and lessons learned regarding the progress of all tasks, the tracking of expenditures, and any other administrative activities.	By the 15 <sup>th</sup> of each month
3	Notification in writing to the CO and WACOR of expenditures reaching 50%, 75% and 90% of the authorized Work Assignment LOE/labor hours.	No less than 15 days in advance of expenditures reaching 50%, 75% and 90% of the authorized Work Assignment LOE/labor hours

## TASK 1: Data Reports

### *Subtask 1A: NPDES Priority Permits Tracking*

Based on the existing information in PMOS and input provided by the WACOR from states, EPA Regions, and ICIS-NPDES, the contractor shall update Fiscal Year 2018 priority permit information on an as needed basis in PMOS, including updating issuance information and other basic data, as well as completing priority permit swaps.

For planning purposes, the contractor shall assume up to two comprehensive updates using ICIS-NPDES data from the WACOR and many updates on an ad hoc basis using data provided by state and EPA Regions during the period of performance.

**Deliverables:** The contractor shall revise Fiscal Year 2018 priority permits data in PMOS within 5 business days following the request from the WACOR.

Deliverables		Due Date
1	Revised list of candidate priority permits in MS Excel for Fiscal Year 2018 after incorporating edits from states and	Within 5 business days following the request from

EPA Regions, as well as ICIS	WACOR
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### ***Subtask 1B: NPDES Permit Backlog Tracking***

The contractor shall provide technical support to track the NPDES Permit Backlog. The contractor shall generate and update the Mid-Year Fiscal Year 2018 Tribal and Non-Tribal backlog reports in accordance with the deliverable schedule below. The contractor shall use data from PMOS and ICIS-NPDES, along with information provided by the WACOR from EPA Regions and states to prepare and update these reports. The contractor shall also provide the detailed data corresponding to the summary numbers in the reports to the WACOR.

The contractor shall also provide support to ensure that the tribal and general permit data in PMOS are complete and accurate, based on the data from states and EPA Regions, as well as data from ICIS-NPDES provided by the WACOR.

The contractor shall also provide ad hoc reports on the permit universe and/or backlog data, as requested by EPA.

For planning purposes, the Contractor shall assume one draft Tribal and Non-Tribal Report and up to two updated versions of these reports following receipt of data from states and EPA Regions. The Contractor shall also assume up to two ad hoc report requests during the period of performance.

All reports and corresponding data shall be provided in Excel format to the WACOR.

**Deliverables:** The contractor shall provide deliverables according to the schedule in the table below:

<b>Deliverables</b>		<b>Due Date for 1 through 4</b>
1	<b>Draft and Updated Non-Tribal Report card</b> (major individual, minor individual, non-stormwater general permit covered facilities, summary) for non-tribal facilities.	Draft and updated reports are due 5 business days after receipt of all of the corresponding permit data from the WACOR
2	<b>Draft and Updated Tribal Report card</b> (major individual, minor individual, non-stormwater general permit covered facilities, summary) for tribal facilities.	
3	<b>Draft and Updated List of all facilities included in the backlog universe</b> (major individual, minor individual, total individual) for tribal and non-tribal permits.	
4	<b>Draft and Updated List of all backlogged facilities</b> (major individual, minor individual, total individual) for tribal and non-tribal permits.	
<b>Deliverables</b>		<b>Due Date for 5</b>
5	<b>Ad hoc reports</b> for additional unanticipated support	Within 5 business days of request by EPA COR

## **TASK 2: PMOS Operations and Management**

### ***Subtask 2A: Subtask Name***

The Contractor shall be responsible for general operations and maintenance of PMOS and shall fix all bugs found as part of routine operational requirements. The contractor shall also assist in upgrades to the PMOS system, if needed, as well as updates to user guide documents if the EPA COR identifies any as necessary. The contractor shall also provide user assistance to EPA Regions and states on PMOS questions and assist in giving new users access to PMOS, as directed by the WACOR.

PMOS non-stormwater and stormwater general permit data will also be used for the General Permits Web Inventory, which will be coordinated with the work on Advance Public Search tools under the eNOI Task Order.

For planning purposes, the contractor shall assume two backups of the files for priority permits status per month.

### **Deliverables:**

<b>Deliverables</b>		<b>Due Date</b>
1	Daily maintenance/de-bugging	As necessary to maintain database functionality
2	Ad hoc user assistance over email or phone regarding PMOS questions	Within 1 business day of request from the WACOR
3	Updates to PMOS User Guide Documents	Within 10 business days of request from the WACOR
4	Backup files of the Priority Permits status information from the PMOS database, in MS Access format.	Within 1 business day of request from the WACOR

## **DELIVERABLES REQUIRED AND SCHEDULE FOR COMPLETION OF TASKS**

<b>Task</b>	<b>Item Require</b>	<b>Due Date</b>	<b>Number of Copies and Format Requirements</b>
0	QAAP based on this PWS	Within 10 days of Work Assignment approval	One Copy, Microsoft Word or PDF

0	Monthly progress report that will include the labor hours and cost expenditures by individual subtasks, issues encountered and lessons learned regarding the progress of all tasks, the tracking of expenditures, and any other administrative activities.	By the 15 <sup>th</sup> of each month	One Copy, Microsoft Word or PDF
0	Notification in writing to the CO and WACOR of expenditures reaching 50%, 75% and 90% of the authorized Work Assignment LOE/labor hours.	No less than 15 days in advance of expenditures reaching 50%, 75% and 90% of the authorized LOE/labor hours	One copy to CO and one to WACOR via Email
1A	Revised list of candidate priority permits in MS Excel for Fiscal Year 2018 after incorporating edits from states and EPA Regions, as well as ICIS	Within 5 business days following the request from WACOR	One Copy, Microsoft Excel
1B	<b>Draft and Updated Non-Tribal Report card</b> (major individual, minor individual, non-stormwater general permit covered facilities, summary) for non-tribal facilities.	Draft and updated reports are due 5 business days after receipt of all of the corresponding permit data from the WACOR	One Copy, Microsoft Excel
1B	<b>Draft and Updated Tribal Report card</b> (major individual, minor individual, non-stormwater general permit covered facilities, summary) for tribal facilities.	Draft and updated reports are due 5 business days after receipt of all of the corresponding permit data from the WACOR	One Copy, Microsoft Excel
1B	<b>Draft and Updated List of all facilities included in the backlog universe</b> (major individual, minor individual, total individual) for tribal and non-tribal permits.	Draft and updated reports are due 5 business days after receipt of all of the corresponding permit data from the WACOR	One Copy, Microsoft Excel

1B	<b>Draft and Updated List of all backlogged facilities</b> (major individual, minor individual, total individual) for tribal and non-tribal permits.	Draft and updated reports are due 5 business days after receipt of all of the corresponding permit data from the WACOR	One Copy, Microsoft Excel
1B	<b>Ad hoc reports</b> for additional unanticipated support	Within 5 business days of request by EPA COR	One Copy, Microsoft Excel
2A	Daily maintenance/de-bugging	As necessary to maintain database functionality	Via database
2A	Ad hoc user assistance over email or phone regarding PMOS questions	Within 1 business day of request from the WACOR	Via phone or email
2A	Updates to PMOS User Guide Documents	Within 10 business days of request from the WACOR	One Copy, Microsoft Word
2A	Backup files of the Priority Permits status information from the PMOS database, in MS Access format.	Within 1 business day of request from the WACOR	One Copy, Microsoft Access

## CONTRACT PWS REFERENCE

See Contract SOW Page 1-10 of 14 Task #3.3 “Water Program Rulemaking” and Task #3.5 “NPDES Permit Support”

## ANTICIPATED TRAVEL REQUIREMENTS

All travel shall be approved in advance by the Contract-Level Contracting Officer’s Representative (CL-COR) and shall be in accordance with the Contract.

## ADDITIONAL REQUIREMENTS:

Office direct costs (ODCs) for copying, postage/courier, supplies, computer usage, and graphics are allowed. No other ODCs are allowable as a direct charge to this delivery order without the prior written approval of the Contracting Officer.

Upon issuance of written technical direction, the Contractor shall submit for inspection of all work in progress at any time under this work assignment. The Contractor shall develop and maintain files supporting each task.

The contractor shall contact the Contracting Officer (CO) and/or the CL-CCOR by telephone to discuss any problems that may adversely affect the work on this Work Assignment. Within five (5) calendar days the contractor shall follow the phone call with a brief written explanation of the problem, including any actions already taken, and/or recommended solutions to correct the problem. Written explanation shall be made available to the CO and the PO.

## **CONTRACTOR IDENTIFICATION**

To avoid any perception that contractor personnel are EPA employees, the contractor shall assure that contractor personnel are clearly identified as independent contractors of EPA when attending meetings with outside parties or visiting field sites.

## **CONTROL REQUIREMENTS**

### Quality Assurance Project Plan (QAPP):

A quality assurance project plan (QAPP) is required for this Work Assignment because it involves the generation, management, distribution, or use of primary and/or secondary environmental data that will be used or have the potential for use in environmental decision-making. The QAPP shall be developed in accordance with the "Office of Water Quality Management Plan" (EPA 821-X-02-001) and shall be formatted as specified in "EPA Requirements for Quality Assurance Project Plans" (EPA QA/R-5).

EPA requires that all environmental data used in decision-making be supported by an approved QAPP. The contractor shall follow the written procedures in the processing manual and any additional guidance provided by the COR in the performance of these tasks.

### Organizational Conflict of Interest:

The Contractor shall warrant that, to the best of the Contractor's knowledge and belief, there are no relevant facts or circumstances which could give rise to an organizational conflict of interest, as defined in FAR Subpart 9.5, or that the contractor has disclosed all such relevant information. See contract clause 1552.209-71 Organization of Conflict of Interest.

### Notification of Conflicts of Interest Regarding Personnel:

The Contractor shall immediately notify the CL-COR and the Contracting Officer of (1) any actual or potential personal conflict of interest with regard to any of its employees working on or having access to information regarding this contract, or (2) any such conflicts concerning subcontractor employees or consultants working on or having access to information regarding the contract, when such conflicts have been reported to the Contractor. A personal conflict of interest is defined as a relationship of an employee, subcontractor employee, or consultant with an entity that may impair the objectivity of the employee, subcontractor employee, or consultant in performing the contract work. See Section H.4, contract clause EPAAR 1552.209-73 Notification of Conflict of Interest.

### Enforcement Sensitive Information:

The contractor recognizes that contractor employees in performing tasks specified by this WA may have access to data/information, either provided by the government or first generated during contract performance, of enforcement sensitive nature which should not be released to the public without Environmental Protection Agency (EPA) approval. Enforcement sensitive refers to

records or information compiled for law enforcement purposes (whether administrative, civil or criminal), the disclosure of which could reasonably be expected to interfere with the enforcement action. It is imperative that all contractor personnel, including but not limited to, subcontractor and consultant personnel assigned to work on this contract and/or WA, or with access to materials developed pursuant to such efforts, understand that this information is confidential and any disclosure or misuse of the information may result in prosecution to the fullest extent of the law. All contractor personnel are expected to exercise due diligence in safeguarding, handling or disposing of any such information.

#### Project Employee Confidentiality Agreement

The contractor agrees that the contractor employee will not disclose, either in whole or in part, to any entity external to the EPA, the Department of Justice, or the contractor, any information or data (as defined in FAR Section 27.401) provided by the government or first generated by the contractor under this contract, any site-specific cost information, or any enforcement strategy without first obtaining the written permission of the EPA CL-CPR. If a contractor, through an employee or otherwise, is subpoenaed to testify or produce documents, which could result in such disclosure, the contractor must provide immediate advance notification to the EPA so that the EPA can take action to prevent such disclosure. Such agreements shall be effective for the life and for a period of five (5) years after completion of the contract.

#### Handling of Confidential Business Information (CBI)

Contractor's access to TSCA CBI must comply with the procedures set forth in the TSCA CBI Security Manual. Likewise, access to FIFRA CBI shall follow the security procedures set forth in the FIFRA Information Security Manual.

To the extent that the work under this contract requires access to proprietary or confidential business or financial data of other companies, and as long as such data remains proprietary or confidential, the contractor shall protect such data from unauthorized use and disclosure.

All files or other information identified as Confidential Business Information (CBI) shall be treated as confidential and kept in a secure area with access limited to only contractor personnel directly involved in the case or special project assignment. The contractor, subcontractor, and consultant personnel are bound by the requirements and sanctions contained in their contracts with the EPA and in EPA's confidentiality regulations found at 40 CFR Part 2, Subpart B. The contractor subcontractors, and consultant must adhere to EPA-approved security plans which describes procedures to protect CBI, and are required to sign non-disclosure agreements before gaining access to CBI.

All official data, findings, and results of investigations and studies completed by the contractor shall be available for EPA and DOJ internal use only. The contractor shall not release any part of such data without the written direction of the WACOR.



### Conference/Meeting Guidelines and Limitations

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The WACOR will then prepare approval internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

PERFORMANCE SURVEILLANCE PLAN			
Performance Requirement	Measurable Performance Standards	Surveillance Methods	Incentives/Disincentives
<p><b>Management and Communications:</b></p> <p>During the life of this work assignment, the Contractor shall notify EPA immediately of any issues that may impact the timeliness of deliverables of the problems associated with the development of deliverables.</p>	<p>The Contractor shall maintain contact with the WACOR throughout the performance of the work assignment.</p> <p>The contractor shall identify to the WACOR any delays with regard to deliverables not less than one week prior to the deliverable date that has been established in the work assignment or technical direction document.</p> <p>The contractor shall identify to the WACOR any issues or concerns that have a direct impact on project schedules within three (3) days of occurrence.</p> <p>The contractor shall provide options for EPA's consideration on resolving or mitigating the impacts identified.</p>	<p>WACOR and CL-COR (as necessary) will allocate the time needed to discuss and address all issues identified by the Contractor. The WACOR and CL-COR will document and maintain a complete record of the issues, agreements and outcome. The WACOR and CL-COR will review monthly progress reports for indicators of problems not previously mentioned. The WACOR will also monitor the timely receipt of deliverables. For those that are late without prior notice, the EPA will formally document to the Contracting Officer the late delivery.</p>	<p>If the contractor fails to implement corrective actions after EPA identifies and provided written documentation of performance issues, EPA will rate this performance category "unsatisfactory."</p> <p>If three or more the active work assignments for the period are rated unsatisfactory, EPA will rate the Business Relations category as unsatisfactory in the CPARS Contract Performance System.</p>

<p><b>Cost Management and Control:</b></p> <p>The Contractor shall perform all work in an efficient and cost effective manner, applying cost control measures where practical.</p>	<p>The Contractor shall monitor, track and accurately report level of effort, labor cost, other direct cost and fee expenditures to EPA through monthly progress reports and approved special reporting requirements.</p> <p>The Contractor shall assign appropriately leveled and skilled personnel to all tasks. The contractor should not exceed established work assignment ceilings and, in general, should expend dollars and hours at similar ratios. If either the expenditure of hours or dollars deviates significantly, the contractor shall provide an explanation in its Monthly Progress Report.</p>	<p>The EPA CL-COR will routinely meet with the Contractor's Project Manager to discuss the work progress and contract and individual work assignment level expenditures.</p> <p>The EPA CL-COR and WACOR shall review the Contractor's monthly progress reports and request the Work Assignment Contracting Officer's Representative to ensure that ceilings are not exceeded, that progress is being made, and that the contractor is effectively utilizing the LOE provided under the work assignment.</p>	<p>EPA will thoroughly review work assignment funding ceiling overruns to determine the contractor's ability to control the situation. If EPA determines that the contractor failed to control cost, the contractor will be rated "unsatisfactory" in this category.</p> <p>Multiple incidents of work assignment overrun that result in an overall cost overrun of greater than 4% of the approved total work assignment funding for the current contract period, will result in an unsatisfactory rating in the CPARS Contract Performance System.</p>
<p><b>Quality of Product/Services:</b></p> <p>The contractor shall ensure documents developed under this task order are quality products that are factual and based on sound science and engineering principles.</p>	<p>Products delivered under this work assignment must not contain any major factual errors. The analyses provided in each product shall be logical, consistent, and defensible.</p>	<p>The WACOR will review all documents delivered under this work assignment for content accuracy.</p>	<p>If EPA determines that the contractor's analyses is factually inaccurate or if significant technical errors are found in any documents produced by the contractor, EPA may determine that the cost associated with redoing the work shall be borne by the contractor.</p> <p>Multiple incidents of this nature under the contract will result in an unsatisfactory rating for Quality and Manage Control being reported to the CPARS Contract Performance System.</p>

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-16				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-16-003			Contract Period 07/01/2016 To 06/30/2018 Base                      Option Period Number    1			Title of Work Assignment/SF Site Name Tech Support for NPDES PQRs				
Contractor EASTERN RESEARCH GROUP, INC.					Specify Section and paragraph of Contract SOW Section 3.1.7					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From 07/01/2017 To 06/30/2018				
Comments: Work shall not commence on this Work Assignment until July 1, 2017.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE:				
07/01/2016 To 06/30/2018										
This Action:										
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:						Cost/Fee		LOE:		
Cumulative Approved:						Cost/Fee		LOE:		
Work Assignment Manager Name Elizabeth Ragnauth							Branch/Mail Code:			
<div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Phone Number: 202-564-3161			
							FAX Number:			
Project Officer Name Tangela Cooper							Branch/Mail Code:			
<div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Phone Number: 202-566-0369			
							FAX Number:			
Other Agency Official Name							Branch/Mail Code:			
<div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Phone Number:			
							FAX Number:			
Contracting Official Name Brad Heath							Branch/Mail Code:			
<div style="display: flex; justify-content: space-between;"> <div>             _____            (Signature)         </div> <div>6/30/2017 _____ (Date)</div> </div>							Phone Number: 513-487-2352			
							FAX Number:			

**PERFORMANCE WORK STATEMENT  
CONTRACT EP-C-16-003  
WORK ASSIGNMENT 1-16**

**Title:** Technical Support for NPDES Program and Permit Quality Reviews

**Work Assignment Contracting Officer's Representative (WACOR):**

<b>Beth Ragnauth</b> Phone: (202) 564-3161 Fax (202) 564-9544 <a href="mailto:ragnauth.elizabeth@epa.gov">ragnauth.elizabeth@epa.gov</a>	<b><u>USPS Mailing Address</u></b> Water Permits Division 1200 Pennsylvania Ave., NW Mail Code 4203M Washington, DC 20460	<b><u>Courier Address</u></b> EPA East Building 1201 Constitution Ave., NW Room 7135D Washington, DC 20004
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**Alternate Work Assignment Contracting Officer's Representative (AWACOR):**

<b>Sharmin Syed</b> Phone: (202) 564-3052 Fax (202) 564-9544 <a href="mailto:syed.sharmin@epa.gov">syed.sharmin@epa.gov</a>	<b><u>USPS Mailing Address</u></b> Water Permits Division 1200 Pennsylvania Ave., NW Mail Code 4203M Washington, DC 20460	<b><u>Courier Address</u></b> EPA East Building 1201 Constitution Ave., NW Room 7135F Washington, DC 20004
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**Period of Performance:** July 1, 2017 to June 30, 2018

**Background:** An important component of a healthy National Pollutant Discharge Elimination System (NPDES) program is permit quality. Program and Permit Quality Reviews (PQRs) allow permitting authorities (during both issuance and oversight processes) to obtain information about the functioning of various aspects of the program and its potential to maintain and improve water quality.

This is particularly important as EPA works to achieve the goals of ensuring waters support designated uses or improving water segments and protecting streams from becoming impaired (maintaining uses). Permits that are written to meet these goals are critical in combination with other Clean Water Act water quality programs in achieving these objectives.

The NPDES program has used a variety of tools over the course of the last three decades to enhance program and permit quality. These methods have included reviews of draft permits using standard checklists, and PQRs. Reviews can be used to enhance specific programs or determine where additional guidance is needed. Most importantly, program and permit quality reviews can be used to improve the integrity of the program and will help EPA improve our ability to measure the success of the program.

Through this review mechanism, EPA promotes national consistency, identifies successes in implementation of the base NPDES program, as well as opportunities for improvement in the development of NPDES permits. The findings of the reviews may be used to identify areas for training or guidance and to identify or assist states in determining any needed action items to

improve their NPDES programs.

Under this work assignment, EPA seeks support in updating draft methodology to allow EPA regions to manage the reviews, and assistance with conducting reviews of state programs and drafting reports outlining the results of the reviews. This scope of work includes implementation of permit quality reviews and results management.

### **Scope of Work:**

This work assignment provides support to the Water Permits Division (WPD) to implement permitting oversight through a quality review process, as well as finalizing tools to ensure continual improvement of the NPDES permitting program. The Contractor shall provide technical support to EPA for the tasks described below. Support under the work assignment may require the Contractor to perform on a rapid response, quick turn-around basis.

### **Task 0: Kickoff Meeting**

A kickoff meeting will be held to review the work statement and clarify the work to be performed. The contractor's work assignment manager and appropriate EPA staff and WACOR should attend. This meeting will be held by teleconference and may occur before the work plan is submitted to EPA.

*Task 0 Deliverables:* There are no deliverables associated with this task.

### **Task 1: Technical and Administrative Support for Implementing PQRs**

The contractor shall support the implementation of:

- Up to five (5) Region-led PQRs during the period of performance, some of which may have been partially conducted during the prior option period;
- One (1) headquarters-led PQR of Region-issued permits for facilities on tribal lands and U.S. territories;
- Final formatting and copy review of up to two (2) reports completed by EPA regional offices.

Implementation of these reviews include planning and coordination with EPA headquarters and EPA regional staff, and review of permits in accordance with existing SOPs, consisting of both a comprehensive program review and topic specific reviews. Task 1 should be supported by staff with at least 10 years of experience writing and/or reviewing NPDES permits; alternate experience may be substituted at the discretion of the EPA work assignment manager.

The tentative schedule for upcoming Region-led PQRs is as follows:

<b>PQR No.</b>	<b>PQR Topic/Type</b>	<b>Schedule (tentative)</b>
#1	Regional PQR (Region 8): Colorado	August 2017
#2	Regional PQR (Region 6): Louisiana	September 2017

#3	Regional PQR (Region 4): Florida	November 2017
#4	Regional PQR (Region 1): Connecticut	March 2017
#5	Regional PQR (Region 5): Illinois	May 2017

The contractor shall support EPA in implementing these reviews. This shall include the collection of permits and fact sheets from permitting authorities identified by regional staff, regulations, and policies, as appropriate. PQRs are conducted using the Standard Operating Procedures and tools currently posted on EPA's NPDES website:

<https://www.epa.gov/npdes/npdes-permit-quality-review-standard-operating-procedures>

The contractor shall support WPD in conducting site visits for up to five Region-led reviews. Each PQR will consist of approximately 10 permits from the states listed above. The details of the number of site visits and permits reviewed may be adjusted by the WACOR based on the unique characteristics of each state and region. Typically, contractor staff review no more than six permits per state.

The contractor shall review materials prior to any site visits, discuss preliminary review findings with EPA, and participate in site visits to regional and state offices. Site visits involve reviewing permit files and administrative records for core review permits, assisting EPA in interviewing permit writers and understanding the complete permit writing process within the State.

The headquarters-led review will require no travel or site visits. Desktop reviews of permits, fact sheets, and applications will be used for this review. In addition, some background research, primarily phone interviews and email communications with personnel in EPA's regional offices, will be required in order to obtain sufficient information to draft the background and process portions of the report.

The contractor shall develop a draft report providing a comprehensive summary of findings and recommendations from the core reviews following the site visits, including draft recommendations for improving quality of permits within specific regions and/or permitting authorities, using the report template developed by EPA (available with the SOP documents referenced above). Examples of complete reports can be found online at <https://www.epa.gov/npdes/regional-and-state-npdes-pqr-reports>. For reviews supported by the contractor, the contractor typically drafts the background sections and the Core Review Findings section, and the appropriately associated portions of the Action Items section. For headquarters-led PQRs, EPA may request additional permit reviews and drafting of report language for other sections of the report such as the national topic areas. On rare occasions, EPA may request the contractor perform similar additional reviews and develop report language for Region-led reviews.

The contractor shall edit and finalize reports after they have undergone reviews by EPA headquarters, regions and states. This includes assisting EPA in finalizing reports for regions previously conducted in addition to developing and finalizing reports for the upcoming reviews. This may include assistance with formatting drafts and using the Word template.

*Task 1 Deliverables:* The contractor shall provide draft reports 30 days after PQR site visit is completed. EPA will review draft reports and provide comments back to contractor within 30 days of receipt of draft report. The contractor shall provide the final draft report within 7 business days after receipt of EPA comments.

### **Task 2: Develop PQR Tools**

The contractor shall assist in the development and/or updating of tools to support the FY18-22 PQR cycle. This may include formatting draft documents or editing existing documents to reflect process changes that will be implemented in the new cycle. This includes drafting new tools to assess national topic areas that are not part of the current PQR process.

Task 2 should be supported by staff experienced in both writing and/or reviewing NPDES permits and developing standard evaluation tools. Additional support will be needed from staff with experience creating and formatting documents such as checklists, standard operating procedure manuals, and report templates in both Word and PDF formats. Ideally, one staff member supporting this task should have direct experience using existing PQR tools.

*Task 2 Deliverables:* The contractor shall provide draft tools/summaries within 10 business days after EPA WAM request for draft PQR tools through written technical directives. EPA will review draft documents and provide comments back to contractor within 30 days of receipt of draft documents. Final tools/summaries are due 7 business days from receipt of EPA comments. Final documents should be provided in both Word and PDF formats. Final PQR tools that will be posted online must be compliant with Section 508 of the Rehabilitation Act of 1973 (as amended) (29 USC § 794d).

### **Task 3: Regional Assistance**

The contractor shall assist in the review of state materials, such as standard conditions and templates, as needed by EPA regions in conducting PQRs as outlined in Task 1, to ensure compliance with the Clean Water Act and appropriate NPDES regulations at 40 CFR part 122. Comments will be due 14 days from receipt of documents from EPA.

## **OTHER REQUIREMENTS**

### **Quality Assurance Statement**

A quality assurance project plan (QAPP) is not required for Tasks 1-3 of this project because they do not involve the generation, management, distribution, or use of primary environmental data that will be used or have the potential for use in environmental decision making.

### **Reporting and Deliverables**

Progress Reports shall be submitted in accordance with the reporting requirements of the contract. In addition, the contractor shall maintain contact with the WACOR to advise the WACOR of progress and problems. All documents shall be delivered in Word, Excel, HTML, and/or PDF format, as requested by the WACOR. The contractor shall notify the EPA immediately when expenditures of 75% and 90% of the work assignment LOE or funding (including pipeline costs) are reached.



### Travel

This work assignment requires domestic travel to regional and/or state offices under this scope of work to support information collection activities. For purposes of costing, assume one person, for a duration of 3 days and 2 nights, for each of the reviews, and assume travel is to state capitals for region-led reviews. Additional local travel may be expected under this work assignment. All travel other than local travel shall be approved in advance by the project officer and shall be in accordance with the contract.

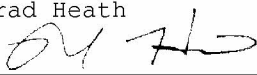
### Conference/Meeting Guidelines and Limitations

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The WACOR will then prepare approval internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

## QUALITY ASSURANCE SURVEILLANCE PLAN

The following performance measures will apply to work under this work assignment

Performance Requirement	Measurable Performance Standards	Surveillance Methods	Incentives/Disincentives
<b>Management and Communications:</b> During the performance of work assignment 1-16, the Contractor shall immediately inform EPA of any issue that may potentially impact project schedules.	The Contractor shall maintain contact with the CL-COR and Work Assignment Contracting Officer's Representative throughout the performance of the contract and identify any issues or concerns to the appropriate EPA person prior to occurrence. In cases where issues have a direct impact on project schedules and cost, the contractor shall provide options for EPA's consideration on resolving or mitigating the impacts.	The CL-COR and Work Assignment Contracting Officer's Representative will allocate the time needed to discuss and address all issues identified by the Contractor. They will document and maintain a complete record of the issues, agreements and outcome. They will review monthly progress reports for indicators of communications problems and will bring issues to the Contractor's immediate attention.	Any issues that impact project schedules that are not brought to the attention of the appropriate CL-COR or Work Assignment Contracting Officer's Representative before occurrence will be unsatisfactory. Two or more incidents during this work assignment option period will be reported as unsatisfactory performance in the CPARS Evaluation System.
<b>Cost Management and Control:</b> The Contractor shall perform all work in an efficient and cost effective manner, applying cost control measures where practical. The Contractor shall immediately inform EPA of any issue that may potentially impact project costs.	<p>The Contractor shall monitor, track and accurately report level of effort, labor cost, other direct cost and fee expenditures to EPA through monthly progress reports and approved special reporting requirements.</p> <p>The Contractor shall assign appropriately leveled and skilled personnel to all tasks, practice and encourage time management, and ensure accurate and appropriate time keeping.</p>	<p>The CL-COR will routinely meet with the Contractor's Project Manager to discuss the work progress, contract and individual work assignment level expenditures. The Project Officer shall review the Contractor's monthly progress reports and request the WACOR's verification of expenditures and technical progress before authorizing invoice payments.</p> <p>The WACOR will maintain regular contact with the Contractor's designated work assignment manager /project manager to discuss work assignment progress and expenditure. The WACOR will review the Contractor's monthly progress report and invoice and provide feedback to the Project Officer on payment.</p>	Any issues that impact project costs should be brought to the attention of the CL-COR and Work Assignment Contracting Officer's Representative. An overrun that exceeds 4% of the total obligation that is the direct result of the Contractor's failure to manage and control cost will result in an unsatisfactory rating being reported to the CPARS Evaluation System.
<b>Technical Analyses:</b> The Contractor shall collect and analyze data in support of the Agency decision-making. The Contractor shall immediately inform EPA of any issue that may potentially impact the project.	The analyses conducted by the contractor shall be factual and defensible and based on sound science and engineering. All data shall be collected from reputable sources and quality assurance measures shall be conducted in accordance with agency requirements and any additional requirements outlined in individual work assignments. Any work requiring the contractor provided options or recommendations shall include the rationale use in selecting the option/recommendation and all other options considered.	The appropriate CL-COR and Work Assignment Contracting Officer's Representative will review all analyses conducted by the Contractor and will independently consider the merit. EPA may opt to peer review analyses to further validate merit.	All analyses conducted for EPA by the Contractor must be factual and based on sound science and engineering. If after reviewing the Contractor's analysis, EPA determines that the content is not factual, legally defensible or based on sound science and engineering, The Contractor's performance will be reported as unsatisfactory in the CPARS Evaluation System.

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 1-16																																																																		
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Contract Number EP-C-16-003	Contract Period 07/01/2016 To 06/30/2021 Base                      Option Period Number    1	Title of Work Assignment/SF Site Name Tech Support for NPDES PQRs																																																																		
Contractor EASTERN RESEARCH GROUP, INC.		Specify Section and paragraph of Contract SOW See PWS																																																																		
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance  From 02/08/2018 To 06/30/2018																																																																		
Comments: The purpose of Amendment 1 is to REMOVE Sharmin Syed as the previous Alternate Work Assignment Contracting Officer's Representative (AWACOR) and to ADD Janita Aguirre as the AWACOR. In addition, Amendment 2 further clarifies Region-Lead PQR's under Task 1 and requests additional support under Task 2.																																																																				
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SFO <input type="checkbox"/> Note: To report additional accounting and appropriations data use EPA Form 1900-69A.																																																																				
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Line</th> <th>DCN (Max 6)</th> <th>Budget/FY (Max 4)</th> <th>Appropriation Code (Max 6)</th> <th>Budget Org/Code (Max 7)</th> <th>Program Element (Max 9)</th> <th>Object Class (Max 4)</th> <th>Amount (Dollars)</th> <th>(Cents)</th> <th>Site/Project (Max 8)</th> <th>Cost Org/Code</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>			Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code	1											2											3											4											5										
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Work Assignment Manager Name Elizabeth Ragnauth  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>		Branch/Mail Code: Phone Number: 202-564-3161 FAX Number:																																																																		
Project Officer Name Tangela Cooper  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>		Branch/Mail Code: Phone Number: 202-566-0369 FAX Number:																																																																		
Other Agency Official Name  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>		Branch/Mail Code: Phone Number: FAX Number:																																																																		
Contracting Official Name Brad Heath  <div style="display: flex; justify-content: space-between;"> <div>           _____          (Signature)       </div> <div>2/8/2018 _____ (Date)</div> </div>		Branch/Mail Code: Phone Number: 513-487-2352 FAX Number:																																																																		

**PERFORMANCE WORK STATEMENT  
CONTRACT EP-C-16-003  
WORK ASSIGNMENT 1-16  
Amendment 1**

**Title:** Technical Support for NPDES Program and Permit Quality Reviews

**Work Assignment Contracting Officer's Representative (WACOR):**

<b>Beth Ragnauth</b> Phone: (202) 564-3161 Fax (202) 564-9544 <a href="mailto:ragnauth.elizabeth@epa.gov">ragnauth.elizabeth@epa.gov</a>	<b><u>USPS Mailing Address</u></b> Water Permits Division 1200 Pennsylvania Ave., NW Mail Code 4203M Washington, DC 20460	<b><u>Courier Address</u></b> EPA East Building 1201 Constitution Ave., NW Room 7135D Washington, DC 20004
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**Alternate Work Assignment Contracting Officer's Representative (AWACOR):**

<b>Janita Aguirre</b> Phone: (202) 566-1149 Fax (202) 564-9544 <a href="mailto:aguirre.janita@epa.gov">aguirre.janita@epa.gov</a>	<b><u>USPS Mailing Address</u></b> Water Permits Division 1200 Pennsylvania Ave., NW Mail Code 4203M Washington, DC 20460	<b><u>Courier Address</u></b> EPA East Building 1201 Constitution Ave., NW Room 7135D½ Washington, DC 20004
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**Period of Performance:** February 8, 2018 to June 30, 2018

**Background:** An important component of a healthy National Pollutant Discharge Elimination System (NPDES) program is permit quality. Program and Permit Quality Reviews (PQRs) allow permitting authorities (during both issuance and oversight processes) to obtain information about the functioning of various aspects of the program and its potential to maintain and improve water quality.

This is particularly important as EPA works to achieve the goals of ensuring waters support designated uses or improving water segments and protecting streams from becoming impaired (maintaining uses). Permits that are written to meet these goals are critical in combination with other Clean Water Act water quality programs in achieving these objectives.

The NPDES program has used a variety of tools over the course of the last three decades to enhance program and permit quality. These methods have included reviews of draft permits using standard checklists, and PQRs. Reviews can be used to enhance specific programs or determine where additional guidance is needed. Most importantly, program and permit quality reviews can be used to improve the integrity of the program and will help EPA improve our ability to measure the success of the program.

Through this review mechanism, EPA promotes national consistency, identifies successes in implementation of the base NPDES program, as well as opportunities for improvement in the development of NPDES permits. The findings of the reviews may be used to identify areas for

training or guidance and to identify or assist states in determining any needed action items to improve their NPDES programs.

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*Task 0 Deliverables:* There are no deliverables associated with this task.

### **Task 1: Technical and Administrative Support for Implementing PQRs**

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#3	Regional PQR (Region 4): Florida	February/March 2018
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#5	Regional PQR (Region 5): Illinois	Spring 2018

The contractor shall support EPA in implementing these reviews. This shall include the collection of permits and fact sheets from permitting authorities identified by regional staff, regulations, and policies, as appropriate. PQRs are conducted using the Standard Operating Procedures and tools currently posted on EPA's NPDES website:  
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The contractor shall assist in the development and/or updating of tools to support the FY18-22 PQR cycle. This may include formatting draft documents or editing existing documents to reflect process changes that will be implemented in the new cycle. This includes drafting new tools to assess national topic areas that are not part of the current PQR process. Additional support for this task is needed beyond the level of effort estimated when the work statement was originally developed.

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<b>Management and Communications:</b> During the performance of work assignment 1-16, the Contractor shall immediately inform EPA of any issue that may potentially impact project schedules.	<p>The Contractor shall maintain contact with the CL-COR and Work Assignment Contracting Officer's Representative throughout the performance of the contract and identify any issues or concerns to the appropriate EPA person prior to occurrence. In cases where issues have a direct impact on project schedules and cost, the contractor shall provide options for EPA's consideration on resolving or mitigating the impacts.</p>	<p>The CL-COR and Work Assignment Contracting Officer's Representative will allocate the time needed to discuss and address all issues identified by the Contractor. They will document and maintain a complete record of the issues, agreements and outcome. They will review monthly progress reports for indicators of communications problems and will bring issues to the Contractor's immediate attention.</p>	<p>Any issues that impact project schedules that are not brought to the attention of the appropriate CL-COR or Work Assignment Contracting Officer's Representative before occurrence will be unsatisfactory. Two or more incidents during this work assignment option period will be reported as unsatisfactory performance in the CPARS Evaluation System.</p>
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<b>Technical Analyses:</b> The Contractor shall collect and analyze data in support of the Agency decision-making. The Contractor shall immediately inform EPA of any issue that may potentially impact the project.	<p>The analyses conducted by the contractor shall be factual and defensible and based on sound science and engineering. All data shall be collected from reputable sources and quality assurance measures shall be conducted in accordance with agency requirements and any additional requirements outlined in individual work assignments. Any work requiring the contractor provided options or recommendations shall include the rationale use in selecting the option/recommendation and all other options considered.</p>	<p>The appropriate CL-COR and Work Assignment Contracting Officer's Representative will review all analyses conducted by the Contractor and will independently consider the merit. EPA may opt to peer review analyses to further validate merit.</p>	<p>All analyses conducted for EPA by the Contractor must be factual and based on sound science and engineering. If after reviewing the Contractor's analysis, EPA determines that the content is not factual, legally defensible or based on sound science and engineering, The Contractor's performance will be reported as unsatisfactory in the CPARS Evaluation System.</p>

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 1-16																																																																		
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Contractor EASTERN RESEARCH GROUP, INC.		Specify Section and paragraph of Contract SOW See PWS																																																																		
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance  From 04/03/2018 To 06/30/2018																																																																		
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<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th>Line</th> <th>DCN (Max 6)</th> <th>Budget/FY (Max 4)</th> <th>Appropriation Code (Max 6)</th> <th>Budget Org/Code (Max 7)</th> <th>Program Element (Max 9)</th> <th>Object Class (Max 4)</th> <th>Amount (Dollars)</th> <th>(Cents)</th> <th>Site/Project (Max 8)</th> <th>Cost Org/Code</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>			Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code	1											2											3											4											5										
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Project Officer Name Tangela Cooper  <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <span>(Signature)</span> <span>(Date)</span> </div>		Branch/Mail Code: Phone Number: 202-566-0369 FAX Number:																																																																		
Other Agency Official Name  <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <span>(Signature)</span> <span>(Date)</span> </div>		Branch/Mail Code: Phone Number: FAX Number:																																																																		
Contracting Official Name Brad Heath  <div style="border-bottom: 1px solid black; width: 100%; text-align: center;"> </div> <div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <span>(Signature)</span> <span>4/3/2018 (Date)</span> </div>		Branch/Mail Code: Phone Number: 513-487-2352 FAX Number:																																																																		

**PERFORMANCE WORK STATEMENT  
CONTRACT EP-C-16-003  
WORK ASSIGNMENT 1-16  
AMENDMENT 2**

**Title:** Technical Support for NPDES Program and Permit Quality Reviews

**Work Assignment Contracting Officer's Representative (WACOR):**

<b>Beth Ragnauth</b> Phone: (202) 564-3161 Fax (202) 564-9544 <a href="mailto:ragnauth.elizabeth@epa.gov">ragnauth.elizabeth@epa.gov</a>	<b><u>USPS Mailing Address</u></b> Water Permits Division 1200 Pennsylvania Ave., NW Mail Code 4203M Washington, DC 20460	<b><u>Courier Address</u></b> EPA East Building 1201 Constitution Ave., NW Room 7135D Washington, DC 20004
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**Alternate Work Assignment Contracting Officer's Representative (AWACOR):**

<b>Janita Aguirre</b> Phone: (202) 566-1149 Fax (202) 564-9544 <a href="mailto:aguirre.janita@epa.gov">aguirre.janita@epa.gov</a>	<b><u>USPS Mailing Address</u></b> Water Permits Division 1200 Pennsylvania Ave., NW Mail Code 4203M Washington, DC 20460	<b><u>Courier Address</u></b> EPA East Building 1201 Constitution Ave., NW Room 7135D½ Washington, DC 20004
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**Period of Performance:** April 3, 2018 to June 30, 2018

**Background:** An important component of a healthy National Pollutant Discharge Elimination System (NPDES) program is permit quality. Program and Permit Quality Reviews (PQRs) allow permitting authorities (during both issuance and oversight processes) to obtain information about the functioning of various aspects of the program and its potential to maintain and improve water quality.

This is particularly important as EPA works to achieve the goals of ensuring waters support designated uses or improving water segments and protecting streams from becoming impaired (maintaining uses). Permits that are written to meet these goals are critical in combination with other Clean Water Act water quality programs in achieving these objectives.

The NPDES program has used a variety of tools over the course of the last three decades to enhance program and permit quality. These methods have included reviews of draft permits using standard checklists, and PQRs. Reviews can be used to enhance specific programs or determine where additional guidance is needed. Most importantly, program and permit quality reviews can be used to improve the integrity of the program and will help EPA improve our ability to measure the success of the program.

Through this review mechanism, EPA promotes national consistency, identifies successes in implementation of the base NPDES program, as well as opportunities for improvement in the development of NPDES permits. The findings of the reviews may be used to identify areas for

training or guidance and to identify or assist states in determining any needed action items to improve their NPDES programs.

Under this work assignment, EPA seeks support in updating draft methodology to allow EPA regions to manage the reviews, and assistance with conducting reviews of state programs and drafting reports outlining the results of the reviews. This scope of work includes implementation of permit quality reviews and results management.

### **Scope of Work:**

This work assignment provides support to the Water Permits Division (WPD) to implement permitting oversight through a quality review process, as well as finalizing tools to ensure continual improvement of the NPDES permitting program. The Contractor shall provide technical support to EPA for the tasks described below. Support under the work assignment may require the Contractor to perform on a rapid response, quick turn-around basis.

### **Task 0: Kickoff Meeting**

A kickoff meeting will be held to review the work statement and clarify the work to be performed. The contractor's work assignment manager and appropriate EPA staff and WACOR should attend. This meeting will be held by teleconference and may occur before the work plan is submitted to EPA.

*Task 0 Deliverables:* There are no deliverables associated with this task.

### **Task 1: Technical and Administrative Support for Implementing PQRs**

The contractor shall support the implementation of:

- Up to ~~five (5)~~ seven (7) Region-led PQRs during the period of performance, some of which may have been partially conducted during the prior option period;
- One (1) headquarters-led PQR of Region-issued permits for facilities on tribal lands and U.S. territories;
- Final formatting and copy review of up to two (2) reports completed by EPA regional offices.

Implementation of these reviews include planning and coordination with EPA headquarters and EPA regional staff, and review of permits in accordance with existing SOPs, consisting of both a comprehensive program review and topic specific reviews. Task 1 should be supported by staff with at least 10 years of experience writing and/or reviewing NPDES permits; alternate experience may be substituted at the discretion of the EPA work assignment manager.

The tentative schedule for upcoming Region-led PQRs is as follows:

<b>PQR No.</b>	<b>PQR Topic/Type</b>	<b>Schedule (tentative)</b>
#1	Regional PQR (Region 8): Colorado	August 2017
#2	Regional PQR (Region 6): Louisiana	September 2017
#3	Regional PQR (Region 4): Florida	February/March 2018
#4	Regional PQR (Region 3): Maryland	September 2017
#5	Regional PQR (Region 5): Illinois	Spring 2018
#6	Regional PQR (Region 3): Delaware	Spring 2018
#7	Regional PQR (Region 8): South Dakota	Summer 2018

The contractor shall support EPA in implementing these reviews. This shall include the collection of permits and fact sheets from permitting authorities identified by regional staff, regulations, and policies, as appropriate. PQRs are conducted using the Standard Operating Procedures and tools currently posted on EPA's NPDES website:

<https://www.epa.gov/npdes/npdes-permit-quality-review-standard-operating-procedures>

The contractor shall support WPD in conducting site visits for up to ~~five~~ seven Region-led reviews. Each PQR will consist of approximately 10 permits from the states listed above. The details of the number of site visits and permits reviewed may be adjusted by the WACOR based on the unique characteristics of each state and region. Typically, contractor staff review no more than six permits per state.

The contractor shall review materials prior to any site visits, discuss preliminary review findings with EPA, and participate in site visits to regional and state offices. Site visits involve reviewing permit files and administrative records for core review permits, assisting EPA in interviewing permit writers and understanding the complete permit writing process within the State.

The headquarters-led review will require no travel or site visits. Desktop reviews of permits, fact sheets, and applications will be used for this review. In addition, some background research, primarily phone interviews and email communications with personnel in EPA's regional offices, will be required in order to obtain sufficient information to draft the background and process portions of the report.

The contractor shall develop a draft report providing a comprehensive summary of findings and recommendations from the core reviews following the site visits, including draft recommendations for improving quality of permits within specific regions and/or permitting authorities, using the report template developed by EPA (available with the SOP documents referenced above). Examples of complete reports can be found online at <https://www.epa.gov/npdes/regional-and-state-npdes-pqr-reports>. For reviews supported by the contractor, the contractor typically drafts the background sections and the Core Review Findings section, and the appropriately associated portions of the Action Items section. For headquarters-led PQRs, EPA may request additional permit reviews and drafting of report language for other sections of the report such as the national topic areas. On rare occasions, EPA may request the contractor perform similar additional reviews and develop report language for Region-led

reviews.

The contractor shall edit and finalize reports after they have undergone reviews by EPA headquarters, regions and states. This includes assisting EPA in finalizing reports for regions previously conducted in addition to developing and finalizing reports for the upcoming reviews. This may include assistance with formatting drafts and using the Word template.

*Task 1 Deliverables:* The contractor shall provide draft reports 30 days after PQR site visit is completed. EPA will review draft reports and provide comments back to contractor within 30 days of receipt of draft report. The contractor shall provide the final draft report within 7 business days after receipt of EPA comments.

### **Task 2: Develop PQR Tools**

The contractor shall assist in the development and/or updating of tools to support the FY18-22 PQR cycle. This may include formatting draft documents or editing existing documents to reflect process changes that will be implemented in the new cycle. This includes drafting new tools to assess national topic areas that are not part of the current PQR process. Additional support for this task is needed beyond the level of effort estimated when the work statement was originally developed.

Task 2 should be supported by staff experienced in both writing and/or reviewing NPDES permits and developing standard evaluation tools. Additional support will be needed from staff with experience creating and formatting documents such as checklists, standard operating procedure manuals, and report templates in both Word and PDF formats. Ideally, one staff member supporting this task should have direct experience using existing PQR tools.

*Task 2 Deliverables:* The contractor shall provide draft tools/summaries within 10 business days after EPA WAM request for draft PQR tools through written technical directives. EPA will review draft documents and provide comments back to contractor within 30 days of receipt of draft documents. Final tools/summaries are due 7 business days from receipt of EPA comments. Final documents should be provided in both Word and PDF formats. Final PQR tools that will be posted online must be compliant with Section 508 of the Rehabilitation Act of 1973 (as amended) (29 USC § 794d).

### **Task 3: Regional Assistance**

The contractor shall assist in the review of state materials, such as standard conditions and templates, as needed by EPA regions in conducting PQRs as outlined in Task 1, to ensure compliance with the Clean Water Act and appropriate NPDES regulations at 40 CFR part 122. Comments will be due 14 days from receipt of documents from EPA.

## **OTHER REQUIREMENTS**

### **Quality Assurance Statement**

A quality assurance project plan (QAPP) is not required for Tasks 1-3 of this project because they do not involve the generation, management, distribution, or use of primary environmental data that

will be used or have the potential for use in environmental decision making.

#### Reporting and Deliverables

Progress Reports shall be submitted in accordance with the reporting requirements of the contract. In addition, the contractor shall maintain contact with the WACOR to advise the WACOR of progress and problems. All documents shall be delivered in Word, Excel, HTML, and/or PDF format, as requested by the WACOR. The contractor shall notify the EPA immediately when expenditures of 75% and 90% of the work assignment LOE or funding (including pipeline costs) are reached.

#### Travel

This work assignment requires domestic travel to regional and/or state offices under this scope of work to support information collection activities. For purposes of costing, assume one person, for a duration of 3 days and 2 nights, for each of the reviews, and assume travel is to state capitals for region-led reviews. Additional local travel may be expected under this work assignment. All travel other than local travel shall be approved in advance by the project officer and shall be in accordance with the contract.

#### Conference/Meeting Guidelines and Limitations

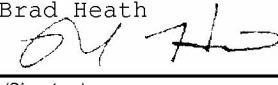
The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The WACOR will then prepare approval internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

## QUALITY ASSURANCE SURVEILLANCE PLAN

The following performance measures will apply to work under this work assignment

Performance Requirement	Measurable Performance Standards	Surveillance Methods	Incentives/Disincentives
<b>Management and Communications:</b> During the performance of work assignment 1-16, the Contractor shall immediately inform EPA of any issue that may potentially impact project schedules.	The Contractor shall maintain contact with the CL-COR and Work Assignment Contracting Officer's Representative throughout the performance of the contract and identify any issues or concerns to the appropriate EPA person prior to occurrence. In cases where issues have a direct impact on project schedules and cost, the contractor shall provide options for EPA's consideration on resolving or mitigating the impacts.	The CL-COR and Work Assignment Contracting Officer's Representative will allocate the time needed to discuss and address all issues identified by the Contractor. They will document and maintain a complete record of the issues, agreements and outcome. They will review monthly progress reports for indicators of communications problems and will bring issues to the Contractor's immediate attention.	Any issues that impact project schedules that are not brought to the attention of the appropriate CL-COR or Work Assignment Contracting Officer's Representative before occurrence will be unsatisfactory. Two or more incidents during this work assignment option period will be reported as unsatisfactory performance in the CPARS Evaluation System.
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<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 1-17								
		<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:								
Contract Number EP-C-16-003	Contract Period 07/01/2016 To 06/30/2018 Base                      Option Period Number 1	Title of Work Assignment/SF Site Name Support for NPDES Animal								
Contractor EASTERN RESEARCH GROUP, INC.		Specify Section and paragraph of Contract SOW See PWS								
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance  From 07/01/2017 To 06/30/2018								
Comments:										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
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2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
07/01/2016 To 06/30/2018										
This Action:										
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee				LOE:		
Cumulative Approved:				Cost/Fee				LOE:		
Work Assignment Manager Name Jennifer Molloy							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Project Officer Name Tangela Cooper							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Other Agency Official Name Brian Frazer							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Contracting Official Name Brad Heath							Branch/Mail Code:			
 7/1/2017 (Signature)                      (Date)							Phone Number: 202-564-1939			
							FAX Number:			
							Phone Number: 202-566-0369			
							FAX Number:			
							Phone Number: 202-566-1652			
							FAX Number:			
							Phone Number: 513-487-2352			
							FAX Number:			

**PERFORMANCE WORK STATEMENT  
CONTRACT EP-C-16-003  
WORK ASSIGNMENT 1-17**

**Title:** Technical Support for the Implementation of the NPDES CAFO Program, Animal Agriculture Partnerships, the Nutrient Recycling Challenge, and NPDES Program Adaptation Tools (short title: NPDES Animal Ag & Adaptation)

**Work Assignment Contracting Officer's Representative (WACOR)**

Jennifer Molloy (4203M)  
Water Permits Division  
Office of Wastewater Management  
U.S. Environmental Protection Agency  
Washington, D.C. 20460  
(202)-564-1939

**Alternative Work Assignment Contracting Officer's Representative (AWACOR)**

Hema Subramanian (4203M)  
Water Permits Division  
Office of Wastewater Management  
U.S. Environmental Protection Agency  
Washington, D.C. 20460  
(202)-564-5041

**Period of Performance:** July 1, 2017 through June 30, 2018

**Background Information:** The NPDES Concentrated Animal Feeding Operation (CAFO) program currently implements measures to prevent and abate pollutant discharges from animal agriculture activities. EPA continues to refine an integrated animal agricultural strategy to improve the environmental performance of animal agriculture through both regulatory and non-regulatory initiatives. The strategy includes supporting State and EPA permitting programs, exploring solid science and technology-based options for more effective management of manure and other AFO pollutants, and harnessing partnerships to improve awareness and encourage voluntary adoption of more effective water quality measures.

The National Water Program strategy to develop adaptation tools for the NPDES program, originally drafted in 2014 and updated periodically, is a multi-faceted approach to ensure that the NPDES program has permit-related tools, data and other information for permit writers and permittees to address challenges associated with changes in precipitation and run-off, higher and lower base flows, drought, rising sea levels, storm surges, ambient water temperature and other related factors.

**Scope of Work:** The administrative and technical tasks provided by the contractor under this work assignment shall support EPA's implementation of all areas noted above. The contractor will not be involved in Agency policy- or decision-making. More specific details concerning the tasks outlined below shall be provided to the contractor through written technical directives from the WACOR in accordance with the technical direction clause of the contract.

## **Task 1. Administration**

The contractor shall provide the necessary oversight, management and cost controls to implement the tasks in this work assignment, including the development of monthly invoices with the necessary break-downs to track costs per task. The contractor shall have calls approximately bi-monthly with the WACOR in order to discuss ongoing and planned work, or as needed. The contractor shall update the QAPP developed in Option Period 0, WA 0-17 to incorporate new and revised tasks.

**Deliverables and Schedule:** Regular and ongoing communication. Monthly invoices. Updated QAPP. Other possible administrative tasks as outlined in the contract and those mutually agreed upon by WACOR and contractor.

## **Task 2. State and Tribal Initiatives to Improve Manure Management**

EPA seeks to provide support to State and Tribal CAFO programs in the form of contractor assistance and EPA specialist input to develop specific elements of the program to improve manure management. The State or Tribal program can propose an array of projects as long as there is reasonable demonstration of sustainable environmental improvement. Projects may be improvements to the regulatory program; supplements to the regulatory program; or actions that will target improved manure management at facilities without permit coverage. Examples of potential projects include: training technical service providers to develop NMPs; developing manure transfer programs; or developing robust technical standards. With fewer and fewer CAFOs obtaining NPDES permit coverage, projects that will provide water quality improvements for discharges at all types of operations are desirable. Examples of contractor assistance include: drafting permit, rule or guidance language; conducting data analyses or modeling; organizing and/or providing training on developing NMPs; conducting livestock operation inspections, water quality or soil sampling or other field investigations; setting up databases; compiling information; or other task directly related to improving manure management. This project seeks to support 2 (possibly more) projects per year at up to \$40,000 in contractor assistance per project (LOE will vary depending on the types of service needed).

**Project 1. Confederated Tribe and Bands of the Yakama Nation with Region 10:** Under a prior contract, EPA worked with the Yakama Tribe to develop nutrient management program language that can be incorporated into Tribal Codes. In Phase II of this project under this work assignment, the contractor will assist the Tribe and its advisors to develop an implementation plan for the Tribe's Nutrient Management Program. The plan will include items such as working with BLM, to incorporate nutrient management provisions into lease agreements; developing monitoring/verification mechanisms; providing some training/education for the Yakama Tribe to use in implementing the Nutrient Management Program.

**Deliverables and Schedule:** Kick-off to occur at the end of Option Period 0 at which time the Tribe will provide input on the how the above tasks should be prioritized. Within 2 weeks of the kick-off meeting (first week of Option Period 1), the contractor will provide a draft outline and

schedule for the work per that input. The work shall proceed in consultation with the Tribe, Region 10 and the WACOR, and products and schedules may be adjusted as needed.

**Project 2. Vermont DEC with Region 1:** Phosphorus TMDL wasteload allocations for Lake Champlain have implications for dairy operations in the watershed, particularly in Vermont where required best management practices are required for all livestock operations. Dairy producers in Vermont are considering converting from confined to pasture-based operations. To support this decision-making, a consortium of partners is undertaking assessments of water quality, social and economic indicators. In consultation with the partners, the contractor will support the compilation and analysis (i.e., through modeling and/or other methods) of water quality-based indicators, i.e., implications for nutrient and/or pathogen delivery to surface waters, with cattle on pasture versus in confined operations. Under this series of tasks, the contractor will quantify the economic costs and time frames needed to transition small dairy farms in Vermont from animal confinement to an economically viable pasture-based operation.

Project 2, Task 1: Prepare Methodology to conduct a compilation of existing economic information. Compile existing economic information for Vermont and relevant regional areas regarding the cost and financial impact of switching from confinement to pasture rotational grazing. Data collection will be prioritized as follows: Vermont, other Northeastern U.S. states, Midwestern states, and finally any states outside of the regions.

**Deliverables and Schedule:** Hold a kick-off meeting with EPA and state project partners to discuss roles and responsibilities. Within 30 business days of kickoff meeting the Contractor shall submit a draft Task 1 methodology describing its approach to compile and analyze existing financial and timeframe information relevant to understanding the anticipated cost for Vermont dairy farms to transition to a pasture grazing system. Within 30 business days of receipt of comments by EPA and project partners, the contractor shall submit a final methodology that addresses EPA's and partner comments on the draft methodology within the draft report.

Product – Draft Task 1 Methodology to Compile and Analyze Existing Economic Data regarding cost and timeframe to transition a small Vermont dairy farm to pasture grazing system. Compile data on prior or existing subsidies (or other schemes) that promote the switch to rotational grazing.

Project 2, Task 2: Compile and analyze available information to better understand the economic cost of lost production to a small size farm in the Lake Champlain area undergoing transition, anticipated long-term economic benefits and at what point in transition the economic shift occurs.

Task 2.1 – Compile data available through scientific literature, state and federal level agricultural departments and agricultural extension offices. EPA and project partners have compiled an initial list of references providing information relevant to the project and expect that the Contractor will conduct a literature review to provide additional relevant data, as appropriate.

Task 2.2 – Analyze available information compiled through Task 2.1 and conduct necessary statistical analyses. The data should be analyzed to provide information related to the following research questions:

- What data exist for VT farmers/farms in the Lake Champlain basin and statewide
  - Demographic (age, education, years farming, etc.)
  - physical (total size and acres in production)
  - cadastral (tax, value, etc.)
  - farm specific (heads of cows, crops grown, equipment, cropping system, fertilization and manure application rates, conservation practices?)
  - financial (farm sales, debt, history of conservation grants)
- What economic data exist for small dairy farms both nationally and in Vermont that have transitioned from an animal confinement system to a pastureland rotational grazing system
  - cadastral (tax, value, etc.)
  - financial (farm sales, debt, history of conservation grants)
  - timeframe and economic cost of lost production to a small size farm in Lake Champlain undergoing transition,
  - anticipated long-term economic benefits from undergoing the transition,
  - at what point in transition the economic shift occurs.
  - Transferability of studies elsewhere in the United states and analyze their value for answering economic questions specific to Vermont small dairy farms.

Task 2.3 –Compile and analyze survey data available from Jennifer Colby’s (UVM Pasture Program Coordinator) 2011 Master’s Thesis, and from a planned follow-up grass-based farm survey by the UVM Center for Sustainable Agriculture. Ms. Colby carried out a survey of grass-based farmers in 2011 as part of her Master thesis. UVM Center for Sustainable Agriculture plans to undertake a follow-up survey of grass-based farms in late 2017/early 2018 to better understand the status of farms (including dairy farms) using managed rotational grazing systems. Information from both surveys will be provided to the Contractor for analysis. The data should be analyzed to provide information related to the following research questions:

- How do grass-based farms contribute to natural resource health?
- What are the financial ramifications of transition from confinement to pasture?
- What factors influence farm success?
- What factors influence farmer quality of life?
- What is the public value gained from an increase in grass-based farms?

Task 2.4 – Assess data gaps. The contractor shall identify additional information necessary to better understand the economic cost of lost production to a small size farm in Lake Champlain undergoing transition, anticipated long-term economic benefits and at what point in transition the economic shift occurs.

**Deliverables and Schedule:** December 2017 Task 2.1 interim report; March 2018 Task 2.2 interim report, May 2018 Task 2.3 interim report and June 2018 submittal of technical

memorandum describing the results of the Task 2 analyses and identifying relevant data sources. Participate in periodic conference calls with the project partners to update them on progress.

Subsequent tasks have been outlined in a separate document, which has been provided to the contractor. Should resources allow, those tasks would be incorporated by reference into this work assignment. However, for purposes of work plan development the contractor shall only include estimates for the tasks outlined above.

### **Task 3. CAFO Permit Record-Keeping and Reporting Application**

The initial objective of this task is to develop an electronic record-keeping and reporting application to accompany the soon-to-be reissued CAFO general permit for the State of Idaho, currently in development by EPA Region 10. The specific platform for this application is in early stages of discussion between EPA and the contractor, but will likely be developed for iPad or notebook format for ease of data input on the farm or ranch during regular inspections or activities, with a function to provide the necessary summary data for annual reports, which can then be submitted to the permitting authority electronically. Raw data will probably be electronically storable and retrievable by individual operators, and not uploaded to any networks, or made available to agencies or the public electronically. The contractor will also consult with producers in the scoping stage and likely for beta-testing, in order to ensure that the product is as user-friendly as possible. In addition, the contractor will work with EPA to ensure development of a product that aligns as closely as possible with CAFO reporting requirements under the e-Reporting Rule.

The secondary objective of this project is to develop this application so that it can be adapted by state programs to meet their record-keeping and reporting needs. Resources allowing, several months into the project, EPA will identify a state program in the process of reissuing their CAFO general permit with an interest in the electronic application. The contractor will work with that program, and possibly some of their producer audience, to adapt the application for that program.

The ultimate objective is to make this easily transferrable and adaptable by any NPDES CAFO program with an interest in using it as is, or having their own programmers adapt it to their needs.

**Deliverables and Schedule:** An initial scoping conversation with the contractor took place during Option Period 0 (under Task 1 of WA 0-17), and the contractor is considering options for the best way to proceed, and plans to provide EPA a memo at about recommending a strategy for development of this application. Following receipt of the memo, EPA and the contractor will agree to a schedule, which will align a deliverable for the Idaho GP record-keeping and reporting application with the TBD finalization date of the Idaho GP. The schedule will include interim dates for draft deliverables, consultation with producers and beta-testing. As that initial product is coming to fruition, EPA and the contractor will jointly develop a strategy and schedule for the second phase of this project, adapting the application for an as yet TBD state program.

#### **Task 4. Options for More Effective Nutrient Management at Animal Feeding Operations**

Work on this task began in Option Period 0, WA 0-17. Work shall continue as planned. The CAFO regulations rely heavily in robust implementation of Nutrient Management Plans (NMPs), and the adequacy of NMPs is based to a large degree on the efficacy of nutrient technical standards for land application of manure. An EPA assessment of 18 state technical standards a few years ago indicated that they are very state-specific, are articulated in a wide variety of ways and, in spite of objectives to the contrary, they are not necessarily protective of water quality. Assessments of NMP implementation reveal that many producers don't have them, and a notable number of the ones who do, do not adhere to them. In addition, nutrient management planning and implementation, per the CAFO regulations, is often convoluted for both the producer and the regulator. The contractor will support EPA exploration of options for implementing more effective nutrient management to meet CWA water quality objectives. A secondary goal is identification of approaches that are easier for producers to implement and for inspectors to verify. Efforts will include: 1) exploring, through research and modeling, soil nitrogen and phosphorus thresholds and their links to *in situ* water quality, i.e., walking backwards from water quality standards to determine nutrient application rates that will ensure that water quality standards are not exceeded, and, 2) evaluating (also largely through modeling) what combinations of best management practices can be implemented with predictable performances under a wide array of nutrient inputs to protect water quality when manure is applied at agronomic (or higher) rates. Outcomes may include a recommended process, an algorithm or a calculator for effective nutrient management related to manure land application. EPA anticipates that this is an undertaking that will require lots of research, consultation and expert input and will likely span more than one Option Period. The contractor and EPA will jointly develop a process to meet the objectives. Tasks may include: literature review and an evaluation of promising existing frameworks for establishing nutrient standards (including international approaches) or performance standards; consulting an array of technical experts (could also use SERA-17); evaluating soil nitrogen and phosphorus threshold concentrations and their links to water quality (possibly on a regional basis) that could be used as benchmarks in nutrient management, including the use of modeling approaches using appropriate platforms such as SWAT or HAWQS; coordinating beta-testing or peer review; and other tasks. Later phases of the project may also include assisting one or more interested states in refining their nutrient management approach or incorporating it into a permit. During this option period, accomplishments shall include development of a work plan that includes short- medium- and long-term tasks, convening the necessary technical expertise, and compiling relevant technical/scientific information to support the ongoing process.

**Deliverables and Schedule:** Deliverables and schedule will be refined in the course of the project; as progressive steps inform subsequent ones. The initial draft literature review (initiated under WA 0-17) will be provided to EPA by July 30, unless an alternate schedule is approved. Based on the results of the literature review EPA and the contractor shall outline the next set of steps and the appropriate schedule. The contractor shall provide a draft of the requested information and analyses per the schedule provided with technical direction from the WACOR. Final versions of products will be delivered per an approved project schedule.



### **Task 5. Nutrient Management Framework for Poultry and Egg Animal Feeding Operations**

The contractor will support EPA in exploring options for simplified nutrient management planning frameworks for the poultry and egg industry, e.g., for dry litter operations. Tasks may include developing a list of criteria that constitute effective nutrient management for dry litter by consulting with industry, academic/technical experts in water quality and nutrient management, and state/regional NPDES program staff; conducting the necessary research and verifications to determine if a simplified method would effectively protect water quality and/or satisfy regulatory requirements; compiling a template or method for nutrient management planning; and piloting the new or refined approach. The scope of this work would likely apply (at least initially) to small and medium animal feeding operations, which could limit implications with respect to the federal CAFO regulations. Tasks for this option period would include consultation with relevant stakeholders to ensure important perspectives and desired outcomes are considered; compilation of relevant information, including key elements of nutrient management planning in different parts of the U.S.; and development of a strategy to achieve the objectives of this task. Development of a methodology and/or a template, including the possibility of a pilot project, would not likely be undertaken until the next option period, but should be considered in strategy work plan development. Some of the work associated with this task may be done in conjunction with Task 2, including the possibility of a pilot project.

**Deliverables and Schedule:** The contractor and the WACOR will agree upon a schedule of tasks and deliverables appropriate for this option period.

### **Task 6. Market Research for the Nutrient Recycling Challenge**

Work on this task began in Option Period 0, WA 0-17. Work shall continue as planned. EPA is partnering with the dairy and swine industries to develop an Innovation Challenge to accelerate development and use of technologies that can recover nitrogen and phosphorus from animal manure and generate value-added products. See: <https://www.epa.gov/npdes/animal-feeding-operations-afos-manure-nutrient-management-technologies>.

The competition has four phases in which innovators can turn their concepts into designs, and eventually, into working technologies to be piloted on livestock farms. In Phase I, which ended January 15, 2016, EPA received 75 concept papers from around the world, and selected 34 submissions to continue on to Phase II of the challenge.

Phase II of the Nutrient Recycling Challenge is a non-competitive incubation program to support innovators as they develop Technology Designs based on their submitted concepts. Phase II began in October 2016 and is only open to the 34 teams selected in Phase I. EPA and its partners are supporting challenge participants with informational webinars and workshops, opportunities to learn about livestock operations, mentorship, and feedback that can maximize their ability to develop designs for effective and affordable technologies.

In conjunction with Phase II of the Nutrient Recycling Challenge, EPA plans to provide innovators information on potential markets for their technologies and the products they



generate. Nutrient recovery technologies can recover and concentrate the nitrogen (N) and phosphorus (P) in animal manure into products with potentially higher fertilizer and economic value than raw manure. However, these technologies are not yet economically feasible in all situations, and the existing and potential markets for the products that such systems generate are poorly characterized. The objective of this project is to characterize the current and potential markets for manure-based, nutrient-containing products generated by nutrient recovery technologies. Higher value products should be identified to the extent possible, such as those that command higher prices because they can be used on human food crops (per FSMA regulations), or can earn “organic” or other certifications. In addition to characterizing current and potential markets, the project should also concisely summarize which manure-based products have the highest real or potential value and in what specific market(s).

**Deliverables and Schedule:** Under WA 0-17 the contractor developed draft content for the market research product. Under WA 1-17 the contractor shall develop this content into a final product, yet TBD – either a report or web content, or a combination both formats. This decision will be made in consultation with the EPA team based on the best fit for the content of the draft materials. The draft product shall be provided to EPA no later than July 15, 2017. The final deadline for a final product is September 30, 2017.

#### **Task 7. Logistical Support for Animal Ag Partnership Projects and Events**

EPA convenes and collaborates with two particular animal agriculture stakeholder groups. Under this task the contractor will provide logistical support for:

- The Nutrient Recycling Challenge (described in the prior task), and
- The Animal Ag Discussion Group. AADG is an informal group of animal agriculture stakeholders including representatives from the U.S. Department of Agriculture (USDA), all sectors of the animal feeding industry and their associations, academia, and states. The group convenes via meetings and calls, as well as on farms and at agricultural events around the country, to keep lines of communication open and develop a shared understanding of how to achieve viable agriculture and clean water.  
<https://www.epa.gov/npdes/animal-feeding-operations-afos-animal-agriculture-industry-partnerships>

The contractor may: provide support for development of outreach materials such as lay-out and graphics; provide logistical support for partner meetings and forums; provide web services support, as needed; and other related tasks as communicated through technical direction by the WACOR.

**Deliverables and Schedule:** Deliverables and schedules will be specified with technical direction and schedules developed with the contractor on a case-by-case basis.

#### **Task 8. Collaborative Animal Agriculture Education Project**

Work on this task began in Option Period 0, WA 0-17. Work shall continue as planned. Under a

prior contract, EPA worked with the Livestock and Poultry Environmental Learning Center (LPELC), with input from the Animal Agriculture Discussion Group (AADG), to develop an educational program hosted on the LPELC website. Phase I of the project, the Overview Module, developed web-based materials to facilitate two-way understanding of livestock and poultry management systems and water quality. In Phase II of this project, to be completed under this task, the contractor will work with EPA, NRCS, LPELC and AADG to develop the next module in the series, specifically on conservation practices and NRCS technical and funding assistance. This module is being supported by NRCS through an interagency agreement and will also be developed with LPELC and presented on the LPELC website.

The module will include web content supplemented by other media, such as videos and maps. The contractor shall assist in development of these materials. The contractor may also assist in refinement and updating of the Overview Module materials (<http://articles.extension.org/pages/73649/animal-agriculture-manure-management-and-water-quality>), as determined to be necessary by EPA. The contractor will be involved in phone calls and other exchanges with all parties noted above to develop the outline, to solicit and collate comments, and to finalize the materials.

**Deliverables and Schedule:** Work shall continue based on the outline provided during WA 0-17. Draft video scripts, draft web content and all other draft materials shall be provided to EPA (and simultaneously to NRCS) for review and approval according to the approved schedule. Final products shall be provided to EPA (and simultaneously to NRCS) within 2 weeks of receiving comments from EPA on the drafts, unless an alternate schedule is agreed upon. This module must be completed no later than September 30, 2017. In the event the Interagency Agreement between EPA and USDA is extended beyond this date, additional edits to the materials may be requested to incorporate requested changes obtained during management reviews at either or both agencies.

### **Task 9. Assess Long-Term Precipitation Data Sets**

Work on this task began in Option Period 0, WA 0-17. Work shall continue as planned. Historic precipitation data sets often span more than 50 years, and until recently all those data were used in making estimates of precipitation, assuming relative stationarity in these data. However, in some regions experiencing notable changes in precipitation frequency, intensity and amount, it may be more appropriate to use a subset of those data, i.e., the more recent data, to obtain the most accurate characterization of current conditions. The contractor will develop a summary of current and evolving scientific information on the use of precipitation data sets in applications such as permit development or wastewater/stormwater design where the estimation of the size of various percentile storms is relevant. To the extent some of the recent developments in this area may not yet be published, this effort will likely include talking with relevant experts at other federal agencies or in academia. EPA will help identify the relevant experts. The contractor's assessment will include ways in which data sets can be statistically evaluated to determine if there are changes over time that warrant the exclusion of some subset of the data. If resources allow, the contractor may be asked to develop a short guidance document on how to apply the method, along with a few examples using existing precipitation data sets.

**Deliverables and Schedule:** The contractor shall provide a draft of the requested information and analyses per the schedule provided with technical direction from the WACOR, and a final version of the requested information and analyses within 1 week of receiving comments from the WACOR on the draft materials, unless additional research is warranted and an extended schedule agreed upon. The final product will include a statistical method, with some verification or examples using test precipitation data sets from a few areas of the U.S. with different precipitation patterns. For purposes of work plan development, the contractor should provide a separate itemized estimate for what it would take to also produce some short ‘how-to’ guidance on how to apply the method.

#### **Task 10. A Permit Writer’s Step-by-Step Decision and Instruction Guide for Estimating Critical Flow Statistics Using Available Tools**

There are a number of new and refined tools, as well as a progression of methods, for estimating critical flow statistics, which is an important element of developing NPDES water quality based effluent limits (WQBELs). Tools and approaches include:

1. *SWToolbox*: computes statistics at individual stream gages.
2. *WREG*: uses output from *SWToolbox* for stream gages throughout a region to compute regression equations for estimation of statistics at ungaged locations.
3. *StreamStats*: provides already developed results from *SWToolbox* and *WREG*.

These tools provide powerful new ways to improve accuracy of estimated critical flows at streams throughout the U.S. However, for the typical permit writer, how to use the tools, as well as understanding which tool or combination of tools is most appropriate for given situations, will be facilitated by some practical guidance.

Under this task the contractor will develop user-friendly, relatively simple step-by-step guidance to inform decision-making, as well as how to use these tools. The guidance will not replace, nor be as detailed as, the relevant User Manuals. However, this guide will be customized for the scenarios encountered by NPDES permit writers and will guide them through the decision-making process, (*e.g., the discharge is five-miles downstream from a gage, though there are no tributaries, diversions or land-use changes in between; what should I do?*). The guide will also provide basic instructions on how to use the tools.

**Deliverables and Schedule:** The contractor shall provide an outline of the proposed guidance, with suggestions for level of details, organizational features, etc. to meet the criteria articulated above, within 30 days of the effective date of this work assignment. This outline shall also be accompanied by a proposed schedule for development of the guidance; the schedule shall include adequate time frames for necessary reviews. The task will include working with USGS and/or their contractors in order to accurately represent the tools and their uses. The contractor will also consult with several State and/or Regional permit writers in order to develop guidance that will meet their needs. The WACOR will make the necessary introductions and contacts.

**Quality Assurance Statement:**

Most of the tasks in this work assignment are being carried forward from WA- 0-17, and are already included in the project QAPP. If those projects are notably evolving, the QAPP may need minor updates. New projects include Tasks 3 and 10, both of which include the development of a management system or guidance for data, but neither of which involve the collection or generation of new data. Therefore, some simple QAPP elements will be required.

As noted in WA 0-17, for the remainder of the projects already covered under the project QAPP (tasks are numbered differently in this WA): a quality assurance project plan (QAPP) is not required for Tasks 1, 7 and 8 because they do not involve the generation, management, distribution, or use of environmental data that will be used or have the potential for use in environmental decision making. EPA anticipates that some of the information collected as part of this work assignment under Tasks 2, 5, 6 and 9 may be secondary data and will be collected from publicly available information sources. However, EPA requires that all environmental data used in decision making be supported by an approved Quality Assurance Project Plan (QAPP). Tasks 4 and 9 likely require the use of environmental data and should be supported by a QAPP developed by the contractor and reviewed by the WACOR and the QA Coordinator. The contractor shall submit the QAPP within 15 days of the submittal of the work plan.

**Level of Effort:** The EPA estimated level of effort for this work assignment is 1,012 hours.

**Other Requirements:**Reporting

Reports shall be submitted in accordance with the reporting requirements of the contract. In addition, the contractor shall maintain bi-weekly telephone contact with the EPA work assignment manager (WACOR) to provide updates on progress and problems. All documents shall be delivered in the word processing format compatible with EPA, HTML, and/or PDF format, as requested by the WACOR. The contractor shall notify the WACOR immediately when expenditures of 75% and 90% of the work assignment LOE or funding (including pipeline costs) are reached.

The contractor shall be prepared to submit for inspection copies of all work in progress any time as requested by the WACOR. The contractor shall not release information or comments on works performed under this work assignment without the WACOR's prior written authorization. Wherever practicable, all written materials submitted to EPA must be doubled-sided and on recycled paper. All computer disks submitted to the WACOR shall be scanned for, and identified as free from viruses.

The contractor shall submit drafts and final products in hard copy as well as on CD in a format compatible with Water Permits Division hardware.

### Travel

All non-local travel shall be authorized in advance by the EPA Project Officer and shall be in accordance with the contract. Travel for any single task should not exceed \$1,000 unless trip has been pre-approved.

### Information Collection

All collection of information and data shall be in accordance with the Office of Water Quality Management Plan and OMB requirements under the Paperwork Reduction Act.

No single event under this Work Assignment is anticipated to exceed \$20,000. The Contractor shall immediately notify the EPA Contracting Officer, CL-COR and WACOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 1-17								
		<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001								
Contract Number EP-C-16-003	Contract Period 07/01/2016 To 06/30/2021 Base                      Option Period Number    1	Title of Work Assignment/SF Site Name NPDES Animal Ag & Adaptation								
Contractor EASTERN RESEARCH GROUP, INC.		Specify Section and paragraph of Contract SOW See PWS								
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance  From 01/25/2018 To 06/30/2018								
Comments:										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
07/01/2016 To 06/30/2021										
This Action:										
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee				LOE:		
Cumulative Approved:				Cost/Fee				LOE:		
Work Assignment Manager Name    Jennifer Molloy							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Project Officer Name    Tangela Cooper							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Other Agency Official Name							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Contracting Official Name    Brad Heath							Branch/Mail Code:			
_____ (Signature)							1/25/2018 (Date)			
							Phone Number: 202-564-1939			
							FAX Number:			
							Phone Number: 202-566-0369			
							FAX Number:			
							Phone Number: 513-487-2352			
							FAX Number:			

**Performance Work Statement  
Contract EP-C-16-003  
Work Assignment 1-17  
Amendment #1**

**Title:** Technical Support for the Implementation of the NPDES CAFO Program, Animal Agriculture Partnerships, the Nutrient Recycling Challenge, and NPDES Program Adaptation and Resilience Tools (short title: NPDES Animal Ag & Adaptation)

<b>Work Assignment Contract Officer's Representative</b>	<b>Alternative Work Assignment Contract Officer's Representative</b>	<b>Alternative Work Assignment Contract Officer's Representative</b>
Jennifer Molloy (4203M) Water Permits Division Office of Wastewater Management U.S. Environmental Protection Agency Washington, D.C. 20460 (202)-564-1939	Hema Subramanian (4203M) Water Permits Division Office of Wastewater Management U.S. Environmental Protection Agency Washington, D.C. 20460 (202)-564-5041	Prasad Chumble (4203M) Water Permits Division Office of Wastewater Management U.S. Environmental Protection Agency Washington, D.C. 20460 (202)-564-0021

**Period of Performance:** January 25, 2018 through June 30, 2018

**Background Information:** The NPDES Concentrated Animal Feeding Operation (CAFO) program currently implements measures to prevent and abate pollutant discharges from animal agriculture activities. EPA continues to refine an integrated animal agricultural strategy to improve the environmental performance of animal agriculture through both regulatory and non-regulatory initiatives. The strategy includes supporting State and EPA permitting programs, exploring solid science and technology-based options for more effective management of manure and other AFO pollutants, and harnessing partnerships to improve awareness and encourage voluntary adoption of more effective water quality measures.

The National Water Program strategy to develop adaptation tools for the NPDES program, originally drafted in 2014 and updated periodically, is a multi-faceted approach to ensure that the NPDES program has permit-related tools, data and other information for permit writers and permittees to address challenges associated with changes in precipitation and run-off, higher and lower base flows, drought, rising sea levels, storm surges, ambient water temperature and other related factors.

**Scope of Work:** The administrative and technical tasks provided by the contractor under this work assignment shall support EPA's implementation of all areas noted above. The contractor will not be involved in Agency policy- or decision-making. More specific details concerning the tasks outlined below shall be provided to the contractor through written technical directives from

the WACOR in accordance with the technical direction clause of the contract.

### **Task 1. Administration**

The contractor shall provide the necessary oversight, management and cost controls to implement the tasks in this work assignment, including the development of monthly invoices with the necessary break-downs to track costs per task. The contractor shall have calls approximately bi-monthly with the WACOR in order to discuss ongoing and planned work, or as needed. The contractor shall update the QAPP developed in Option Period 0, WA 0-17 to incorporate new and revised tasks.

**Deliverables and Schedule:** Regular and ongoing communication. Monthly invoices. Updated QAPP. Other possible administrative tasks as outlined in the contract and those mutually agreed upon by WACOR and contractor.

### **Task 2. State and Tribal Initiatives to Improve Manure Management**

EPA seeks to provide support to State and Tribal CAFO programs in the form of contractor assistance and EPA specialist input to develop specific elements of the program to improve manure management. The State or Tribal program can propose an array of projects as long as there is reasonable demonstration of sustainable environmental improvement. Projects may be improvements to the regulatory program; supplements to the regulatory program; or actions that will target improved manure management at facilities without permit coverage. Examples of potential projects include: training technical service providers to develop NMPs; developing manure transfer programs; or developing robust technical standards. With fewer and fewer CAFOs obtaining NPDES permit coverage, projects that will provide water quality improvements for discharges at all types of operations are desirable. Examples of contractor assistance include: drafting permit, rule or guidance language; conducting data analyses or modeling; organizing and/or providing training on developing NMPs; conducting livestock operation inspections, water quality or soil sampling or other field investigations; setting up databases; compiling information; or other task directly related to improving manure management. This project seeks to support 2 (possibly more) projects per year at up to \$40,000 in contractor assistance per project (LOE will vary depending on the types of service needed).

**Project 1. Confederated Tribe and Bands of the Yakama Nation with Region 10:** Under a prior contract, EPA worked with the Yakama Tribe to develop nutrient management program language that can be incorporated into Tribal Codes. In Phase II of this project under this work assignment, the contractor will assist the Tribe and its advisors to develop an implementation plan for the Tribe's Nutrient Management Program. The plan will include items such as working with BLM, to incorporate nutrient management provisions into lease agreements; developing monitoring/verification mechanisms; providing some training/education for the Yakama Tribe to use in implementing the Nutrient Management Program.

**Deliverables and Schedule:** Kick-off to occur at the end of Option Period 0 at which time the Tribe will provide input on the how the above tasks should be prioritized. Within 2 weeks



of the kick-off meeting (first week of Option Period 1), the contractor will provide a draft outline and schedule for the work per that input. The work shall proceed in consultation with the Tribe, Region 10 and the WACOR, and products and schedules may be adjusted as needed.

**Project 2. Vermont DEC with Region 1:** Phosphorus TMDL wasteload allocations for Lake Champlain have implications for dairy operations in the watershed, particularly in Vermont where required best management practices are required for all livestock operations. Dairy producers in Vermont are considering converting from confined to pasture-based operations. To support this decision-making, a consortium of partners is undertaking assessments of water quality, social and economic indicators. In consultation with the partners, the contractor will support the compilation and analysis (i.e., through modeling and/or other methods) of water quality-based indicators, i.e., implications for nutrient and/or pathogen delivery to surface waters, with cattle on pasture versus in confined operations. Under this series of tasks, the contractor will quantify the economic costs and time frames needed to transition small dairy farms in Vermont from animal confinement to an economically viable pasture-based operation.

Project 2, Task 1: Prepare Methodology to conduct a compilation of existing economic information. Compile existing economic information for Vermont and relevant regional areas regarding the cost and financial impact of switching from confinement to pasture rotational grazing. Data collection will be prioritized as follows: Vermont, other Northeastern U.S. states, Midwestern states, and finally any states outside of the regions.

**Deliverables and Schedule:** Hold a kick-off meeting with EPA and state project partners to discuss roles and responsibilities. Within 30 business days of kickoff meeting the Contractor shall submit a draft Task 1 methodology describing its approach to compile and analyze existing financial and timeframe information relevant to understanding the anticipated cost for Vermont dairy farms to transition to a pasture grazing system. Within 30 business days of receipt of comments by EPA and project partners, the contractor shall submit a final methodology that addresses EPA's and partner comments on the draft methodology within the draft report.

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Task 2.1 – Compile data available through scientific literature, state and federal level agricultural departments and agricultural extension offices. EPA and project partners have compiled an initial list of references providing information relevant to the project

and expect that the Contractor will conduct a literature review to provide additional relevant data, as appropriate.

Task 2.2 – Analyze available information compiled through Task 2.1 and conduct necessary statistical analyses. The data should be analyzed to provide information related to the following research questions:

- What data exist for VT farmers/farms in the Lake Champlain basin and statewide
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  - Transferability of studies elsewhere in the United states and analyze their value for answering economic questions specific to Vermont small dairy farms.

Task 2.3 –Compile and analyze survey data available from Jennifer Colby’s (UVM Pasture Program Coordinator) 2011 Master’s Thesis, and from a planned follow-up grass-based farm survey by the UVM Center for Sustainable Agriculture. Ms. Colby carried out a survey of grass-based farmers in 2011 as part of her Master thesis. UVM Center for Sustainable Agriculture plans to undertake a follow-up survey of grass-based farms in late 2017/early 2018 to better understand the status of farms (including dairy farms) using managed rotational grazing systems. Information from both surveys will be provided to the Contractor for analysis. The data should be analyzed to provide information related to the following research questions:

- How do grass-based farms contribute to natural resource health?
- What are the financial ramifications of transition from confinement to pasture?
- What factors influence farm success?
- What factors influence farmer quality of life?
- What is the public value gained from an increase in grass-based farms?

Task 2.4 – Assess data gaps. The contractor shall identify additional information necessary to better understand the economic cost of lost production to a small size farm

in Lake Champlain undergoing transition, anticipated long-term economic benefits and at what point in transition the economic shift occurs.

**Deliverables and Schedule:** December 2017 Task 2.1 interim report; March 2018 Task 2.2 interim report, May 2018 Task 2.3 interim report and June 2018 submittal of technical memorandum describing the results of the Task 2 analyses and identifying relevant data sources. Participate in periodic conference calls with the project partners to update them on progress.

Subsequent tasks have been outlined in a separate document, which has been provided to the contractor. Should resources allow, those tasks would be incorporated by reference into this work assignment. However, for purposes of work plan development the contractor shall only include estimates for the tasks outlined above.

**Project 3. Shoshone Bannock Tribe with Region 10.** This project will use the base information on tribal nutrient codes developed for the Yakama Tribe (Project 1) and adapt it for the Shoshone Bannock Tribe. Outcomes are similar, i.e., using Tribal Codes to improve nutrient management, though conditions and scenarios differ.

**Deliverables and Schedule:** Hold a kick-off meeting with Tribal and EPA project partners to discuss issues specific to the Shoshone Bannock tribal lands, specific objectives, priorities and approximate time frames for the project. Within 2 weeks of the kick-off meeting, the contractor will provide a draft outline and schedule for the work per that input. The work shall proceed in consultation with the Tribe, Region 10 and the WACOR, and products and schedules may be adjusted as needed.

### **Task 3. CAFO Permit Record-Keeping and Reporting Application**

The objective of this task is to complete a Google Forms record-keeping and reporting application to accompany the soon-to-be reissued CAFO general permit for the State of Idaho, currently in development by EPA Region 10. The forms will facilitate ease of data input on the farm or ranch during regular inspections or activities, with a function to provide the necessary summary data for annual reports, which can then be submitted to the permitting authority electronically. Raw data will be electronically storable and retrievable by individual operators, and not uploaded to any networks or made available to agencies or the public electronically. The contractor, with facilitation by the Region 10 CAFO coordinator/ag advisor, will consult with producers in the scoping stage and for beta-testing, in order to ensure that the product is as user-friendly as possible. In addition, the contractor will work with EPA to ensure development of a product that aligns as closely as possible with CAFO reporting requirements under the e-Reporting Rule and with the elements of the Idaho CAFO general permit.

**Deliverables and Schedule:** This work is in progress and the schedule is paced by development of the general permit and feed-back from the producer group. The final produce will be a series of Google Forms that covers all of the record-keeping and reporting requirements of the Idaho CAFO general permit, and shall be timed to coincide with public notice and finalization of the permit.

#### **Task 4. Logistical Support for Animal Ag Partnership Projects and Events**

EPA convenes and collaborates with two particular animal agriculture stakeholder groups. Under this task the contractor will provide logistical support for:

- The Nutrient Recycling Challenge (described in the prior task), and
- The Animal Ag Discussion Group. AADG is an informal group of animal agriculture stakeholders including representatives from the U.S. Department of Agriculture (USDA), all sectors of the animal feeding industry and their associations, academia, and states. The group convenes via meetings and calls, as well as on farms and at agricultural events around the country, to keep lines of communication open and develop a shared understanding of how to achieve viable agriculture and clean water.  
<https://www.epa.gov/npdes/animal-feeding-operations-afos-animal-agriculture-industry-partnerships>

The contractor may: provide support for development of outreach materials such as lay-out and graphics; provide logistical support for partner meetings and forums; provide web services support, as needed; and other related tasks as communicated through technical direction by the WACOR.

**Deliverables and Schedule:** Deliverables and schedules will be specified with technical direction and schedules developed with the contractor on a case-by-case basis.

#### **Task 5. Collaborative Animal Agriculture Education Project**

Work on this task began in Option Period 0, WA 0-17, and is all but completed. Some final edits, per NRCS and EPA may be requested, to bring the module to fruition on the Livestock and Poultry Environmental Learning Center (LPELC) website.

**Deliverables and Schedule:** Edits to the final web content and videos will be made within 2 weeks of receiving final technical direction from EPA. The entire module will go live on the LPELC website within 1 week of receiving that technical direction from EPA.

#### **Task 6. A Permit Writer's Step-by-Step Decision and Instruction Guide for Estimating Critical Flow Statistics Using Available Tools**

There are a number of new and refined tools, as well as a progression of methods, for estimating critical flow statistics, which is an important element of developing NPDES water quality based effluent limits (WQBELs). Tools and approaches include:

1. *SWToolbox*: computes statistics at individual stream gages.
2. *WREG*: uses output from *SWToolbox* for stream gages throughout a region to compute regression equations for estimation of statistics at ungaged locations.
3. *StreamStats*: provides already developed results from *SWToolbox* and *WREG*.

These tools provide powerful new ways to improve accuracy of estimated critical flows at streams throughout the U.S. However, for the typical permit writer, how to use the tools, as well as understanding which tool or combination of tools is most appropriate for given situations, will be facilitated by some practical guidance.

Under this task the contractor will develop user-friendly, relatively simple step-by-step guidance to inform decision-making, as well as how to use these tools. The guidance will not replace, nor be as detailed as, the relevant User Manuals. However, this guide will be customized for the scenarios encountered by NPDES permit writers and will guide them through the decision-making process, (*e.g., the discharge is five-miles downstream from a gage, though there are no tributaries, diversions or land-use changes in between; what should I do?*). The guide will also provide basic instructions on how to use the tools.

**Deliverables and Schedule:** The contractor shall provide an outline of the proposed guidance, with suggestions for level of details, organizational features, etc. to meet the criteria articulated above, within 2 weeks of receiving technical direction from the WACOR to initiate the project. This outline shall also be accompanied by a proposed schedule for development of the guidance; the schedule shall include adequate time frames for necessary reviews. The task will include working with USGS and/or their contractors in order to accurately represent the tools and their uses. The contractor will also consult with several State and/or Regional permit writers in order to develop guidance that will meet their needs. The WACOR will make the necessary introductions and contacts.

## **Task 8. Support Region 5 in Ohio Authorization Process**

The state of Ohio is currently going through the formal authorization process of having the NPDES CAFO program and stormwater from agricultural operations transition from Ohio EPA to Ohio Department of Agriculture (ODA). This includes numerous reviews and cross-walks to assess ODA rules and program for conformance with the federal rules. It will also require public notice and comment, as well as the likelihood of public hearings. The contractor shall provide support to EPA Region 5 for certain aspects of this process, such as assessing ODA rules and program description for conformance with the e-reporting rule, compilation of public comments, drafting responses to comments, logistical support for public hearings, and other tasks associated with any U.S. EPA action on Ohio's request to transfer. The contractor will not be undertaking inherent government functions, *e.g.,* determining whether or not Ohio regulations meet the federal requirements, but will provide support to EPA's determinations. The contractor will not be involved in all elements of the review, but will provide support as EPA determines that there is a need.

**Deliverables and Schedule:** The WACOR will schedule a 3-way call with the contractor and Region 5 to discuss schedule and specific deliverables. Deliverables may evolve as the authorization process moves forward. The contractor will be expected to be responsive to quick turn-arounds as well as longer term objectives. If the authorization process is not completed by June 2018, some specific tasks may be extended into the next option period if resources are available.

**Quality Assurance Statement:** Most of the tasks in this work assignment are being carried forward from WA- 0-17, and are already included in the project QAPP. If those projects are notably evolving, the QAPP may need minor updates. New projects include Tasks 3 and 6, both of which include the development of a management system or guidance for data, but neither of which involve the collection of generation of new data. Therefore, some simple QAPP elements will be required.

As noted in WA 0-17, for the remainder of the projects already covered under the project QAPP (some tasks are numbered differently in this WA amendment): a quality assurance project plan (QAPP) is not required for Tasks 1, 2, 4, 5 and 8 because they do not involve the generation, management, distribution, or use of environmental data that will be used or have the potential for use in environmental decision making. EPA requires that all environmental data used in decision making be supported by an approved Quality Assurance Project Plan (QAPP). The contractor shall submit the QAPP within 15 days of the submittal of the work plan, as relevant.

**Level of Effort:** The EPA estimated level of effort for this work assignment is an additional 440 hours.

### **Other Requirements:**

#### Reporting

Reports shall be submitted in accordance with the reporting requirements of the contract. In addition, the contractor shall maintain bi-weekly telephone contact with the EPA work assignment manager (WACOR) to provide updates on progress and problems. All documents shall be delivered in the word processing format compatible with EPA, HTML, and/or PDF format, as requested by the WACOR. The contractor shall notify the WACOR immediately when expenditures of 75% and 90% of the work assignment LOE or funding (including pipeline costs) are reached.

The contractor shall be prepared to submit for inspection copies of all work in progress any time as requested by the WACOR. The contractor shall not release information or comments on works performed under this work assignment without the WACOR's prior written authorization. Wherever practicable, all written materials submitted to EPA must be doubled-sided and on recycled paper. All computer disks submitted to the WACOR shall be scanned for, and identified as free from viruses.

The contractor shall submit drafts and final products in hard copy as well as on CD in a format compatible with Water Permits Division hardware.

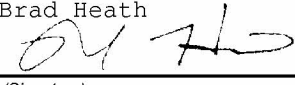
#### Travel

All non-local travel shall be authorized in advance by the EPA Project Officer and shall be in accordance with the contract. Travel for any single task should not exceed \$1,000 unless trip has been pre-approved.

### Information Collection

All collection of information and data shall be in accordance with the Office of Water Quality Management Plan and OMB requirements under the Paperwork Reduction Act.

**No single event under this Work Assignment is anticipated to exceed \$20,000. The Contractor shall immediately notify the EPA Contracting Officer, CL-COR and WACOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.**

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-17				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000002				
Contract Number EP-C-16-003			Contract Period   07/01/2016   To   06/30/2021 Base                      Option Period Number      1			Title of Work Assignment/SF Site Name NPDES Animal Ag & Adaptation				
Contractor EASTERN RESEARCH GROUP, INC.					Specify Section and paragraph of Contract SOW See PWS					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval					Period of Performance  From   04/03/2018   To   06/30/2018					
Comments:										
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Superfund           <span>Accounting and Appropriations Data</span> <input checked="" type="checkbox"/> Non-Superfund         </div>										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE:				
07/01/2016 To 06/30/2021										
This Action:										
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:					Cost/Fee			LOE:		
Cumulative Approved:					Cost/Fee			LOE:		
Work Assignment Manager Name   Jennifer Molloy							Branch/Mail Code:			
<div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Phone Number: 202-564-1939			
							FAX Number:			
Project Officer Name   Tangela Cooper							Branch/Mail Code:			
<div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Phone Number: 202-566-0369			
							FAX Number:			
Other Agency Official Name							Branch/Mail Code:			
<div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>							Phone Number:			
							FAX Number:			
Contracting Official Name   Brad Heath							Branch/Mail Code:			
<div style="display: flex; justify-content: space-between;"> <div>             _____            (Signature)         </div> <div>4/3/2018 _____ (Date)</div> </div>							Phone Number: 513-487-2352			
							FAX Number:			



**PERFORMANCE WORK STATEMENT  
CONTRACT EP-C-16-003  
WORK ASSIGNMENT 1-17  
AMENDMENT 2**

**Title:** Technical Support for the Implementation of the NPDES CAFO Program, Animal Agriculture Partnerships, the Nutrient Recycling Challenge, NPDES Program Adaptation and Resilience Tools, NPDES Aquaculture, and NPDES Program Messaging (short title: NPDES Animal Ag, Adaptation, Aquaculture & Messaging)

**Work Assignment Contract  
Officer's Representative**

Jennifer Molloy (4203M)  
Water Permits Division  
Office of Wastewater  
Management  
U.S. Environmental Protection  
Agency  
Washington, D.C. 20460  
(202)-564-1939

**Alternative Work  
Assignment  
Contracting Officer's  
Representative**

Hema Subramanian (4203M)  
Water Permits Division  
Office of Wastewater  
Management  
U.S. Environmental Protection  
Agency  
Washington, D.C. 20460  
(202)-564-5041

**Alternative Work  
Assignment Contracting  
Officer's Representative**

Prasad Chumble (4203M)  
Water Permits Division  
Office of Wastewater  
Management  
U.S. Environmental Protection  
Agency  
Washington, D.C. 20460  
(202)-564-0021

**Period of Performance:** April 3, 2018 through June 30, 2018

**Background Information:** This work assignment covers four separate NPDES program areas plus administrative tasks.

**Part I. Administration.** This includes project management tasks. (Task 1)

**Part II. Animal Agriculture.** The NPDES Concentrated Animal Feeding Operation (CAFO) program currently implements measures to prevent and abate pollutant discharges from animal agriculture activities. EPA continues to refine an integrated animal agricultural strategy to improve the environmental performance of animal agriculture through both regulatory and non-regulatory initiatives. The strategy includes supporting State and EPA permitting programs, exploring solid science and technology-based options for more effective management of manure and other AFO pollutants, and harnessing partnerships to improve awareness and encourage voluntary adoption of more effective water quality measures. (Tasks 2-7)

**Part III. Adaptation and Resilience Tools.** The National Water Program strategy to develop adaptation tools for the NPDES program, originally drafted in 2014 and updated periodically, is a multi-faceted approach to ensure that the NPDES program has permit-related tools, data and other information for permit writers and permittees to address challenges associated with changes in precipitation and run-off, higher and lower base flows, drought, rising sea levels, storm surges, ambient water temperature and other related factors. (Task 8-9)

**Part IV. Aquaculture.** Within the general area of aquaculture, the NPDES program issues permits for a variety of systems that culture or husband marine and freshwater animals, and occasionally plants. These can include fish hatcheries, raceways, ponds or recirculating systems, floating or submersible net pans or

cages and bag, rack or suspended shellfish culture, when these systems are or result in point source discharges of pollutants to water of the U.S. Operations that produce 100,000 pounds annually of fish or shellfish are subject to the concentrated aquatic animal production (CAAP) effluent guidelines, but many smaller aquatic animal production facilities (AAPFs) that are point source discharges of pollutants to waters of the U.S. are also subject to NPDES permitting. (Tasks 10-12)

**Part V. NPDES Messaging.** The NPDES Messaging effort is compiling information to characterize the purpose and accomplishment of the program over 40 years, with emphasis on national successes in pollutant reduction as well as state and regional successes. (Task 13)

### **Scope of Work:**

The administrative and technical tasks provided by the contractor under this work assignment shall support EPA's implementation of all areas noted above. The contractor will not be involved in Agency policy- or decision-making. More specific details concerning the tasks outlined below shall be provided to the contractor through written technical directives from the WACOR in accordance with the technical direction clause of the contract.

## **PART I. ADMINISTRATION**

### **Task 1. Project Management** [Additional 5 hours LOE]

The contractor shall provide the necessary oversight, management and cost controls to implement the tasks in this work assignment, including the development of monthly invoices with the necessary breakdowns to track costs per task. The contractor shall have calls approximately bi-monthly with the WACOR in order to discuss ongoing and planned work, or as needed. The contractor shall update the QAPP developed in Option Period 0, WA 0-17 to incorporate new and revised tasks.

**Deliverables and Schedule:** Regular and ongoing communication. Monthly invoices. Updated QAPP. Other possible administrative tasks as outlined in the contract and those mutually agreed upon by WACOR and contractor.

## **PART II. ANIMAL AGRICULTURE**

### **Task 2. Supporting State and Tribal Initiatives to Improve Manure Management** [Additional 40 hours LOE]

EPA seeks to provide support to State and Tribal CAFO programs in the form of contractor assistance and EPA specialist input to develop specific elements of the program to improve manure management. The State or Tribal program can propose an array of projects as long as there is reasonable demonstration of sustainable environmental improvement. Projects may be improvements to the regulatory program; supplements to the regulatory program; or actions that will target improved manure management at facilities without permit coverage. Examples of potential projects include: training technical service providers to develop NMPs; developing manure transfer programs; or developing robust technical standards. With fewer and fewer CAFOs obtaining NPDES permit coverage, projects that will provide water quality improvements for discharges at all types of operations are desirable. Examples of contractor assistance include: drafting permit, rule or guidance language; conducting data analyses or modeling; organizing and/or providing training on developing NMPs; conducting livestock operation inspections, water quality or soil sampling or other field investigations; setting up databases; compiling information; or other task directly related to improving manure management. This project seeks to support 2 (possibly more) projects per year at up to \$40,000 in contractor assistance per project (LOE will vary depending on

the types of service needed).

**Project 1. Confederated Tribe and Bands of the Yakama Nation with Region 10:** Under a prior contract, EPA worked with the Yakama Tribe to develop nutrient management program language that can be incorporated into Tribal Codes. In Phase II of this project under this work assignment, the contractor will assist the Tribe and its advisors to develop an implementation plan for the Tribe's Nutrient Management Program. The plan will include items such as working with BLM, to incorporate nutrient management provisions into lease agreements; developing monitoring/verification mechanisms; providing some training/education for the Yakama Tribe to use in implementing the Nutrient Management Program.

**Deliverables and Schedule:** Kick-off to occur at the end of Option Period 0 at which time the Tribe will provide input on the how the above tasks should be prioritized. Within 2 weeks of the kick-off meeting (first week of Option Period 1), the contractor will provide a draft outline and schedule for the work per that input. The work shall proceed in consultation with the Tribe, Region 10 and the WACOR, and products and schedules may be adjusted as needed.

**Project 2. Vermont DEC with Region 1:** Phosphorus TMDL wasteload allocations for Lake Champlain have implications for dairy operations in the watershed, particularly in Vermont where required best management practices are required for all livestock operations. Dairy producers in Vermont are considering converting from confined to pasture-based operations. To support this decision-making, a consortium of partners is undertaking assessments of water quality, social and economic indicators. In consultation with the partners, the contractor will support the compilation and analysis (i.e., through modeling and/or other methods) of water quality-based indicators, i.e., implications for nutrient and/or pathogen delivery to surface waters, with cattle on pasture versus in confined operations. Under this series of tasks, the contractor will quantify the economic costs and time frames needed to transition small dairy farms in Vermont from animal confinement to an economically viable pasture-based operation.

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**Deliverables and Schedule:** Hold a kick-off meeting with EPA and state project partners to discuss roles and responsibilities. Within 30 business days of kickoff meeting the Contractor shall submit a draft Task 1 methodology describing its approach to compile and analyze existing financial and timeframe information relevant to understanding the anticipated cost for Vermont dairy farms to transition to a pasture grazing system. Within 30 business days of receipt of comments by EPA and project partners, the contractor shall submit a final methodology that addresses EPA's and partner comments on the draft methodology within the draft report.

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  - cadastral (tax, value, etc.)
  - farm specific (heads of cows, crops grown, equipment, cropping system, fertilization and manure application rates, conservation practices?)
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  - Transferability of studies elsewhere in the United states and analyze their value for answering economic questions specific to Vermont small dairy farms.

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**Deliverables and Schedule:** December 2017 Task 2.1 interim report; March 2018 Task 2.2 interim report, May 2018 Task 2.3 interim report and June 2018 submittal of technical memorandum

describing the results of the Task 2 analyses and identifying relevant data sources. Participate in periodic conference calls with the project partners to update them on progress.

Subsequent tasks have been outlined in a separate document, which has been provided to the contractor. Should resources allow, those tasks would be incorporated by reference into this work assignment. However, for purposes of work plan development the contractor shall only include estimates for the tasks outlined above.

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**Deliverables and Schedule:** Hold a kick-off meeting with Tribal and EPA project partners to discuss issues specific to the Shoshone Bannock tribal lands, specific objectives, priorities and approximate time frames for the project. Within 2 weeks of the kick-off meeting, the contractor will provide a draft outline and schedule for the work per that input. The work shall proceed in consultation with the Tribe, Region 10 and the WACOR, and products and schedules may be adjusted as needed.

**Project 4. Oklahoma Department of Agriculture, Food and Forestry with Region 6.** ODAFF received numerous NOIs under the 2017 Construction General Permit (CGP: OKR10F000) for dry litter poultry operations. ODAFF would like to develop an information flyer specific to their Licensing Program that explains CGP requirements for agriculture-related operations. The contractor will work with ODAFF and Region 6 CAFO and stormwater programs to ensure accuracy of the content of the flyer. The product will likely be a 1-page, possibly tri-fold design, flyer, but may be adapted to another format as the project evolves.

**Deliverables and Schedule:** The WACOR and Region 6 will schedule a kick-off meeting with ODAFF. Within 2 weeks of ODAFF and Region 6 providing the contractor all the necessary information regarding content, the contractor shall provide draft content back to all parties. Within 2 weeks of receiving comments back from ODAFF and EPA, the contractor will provide a final draft, in whatever format has been agreed to. The final product shall be provided electronically, in whatever program format it has been developed, as well as in pdf format. The final product may be in color, and could include photos, if provided by Region 6 or ODAFF. EPA does not expect printing expenses to be incurred under this task, though that may be considered at a later date.

**Project 5. New Mexico Environment Department with Region 6.** NMED, though not authorized to administer the NPDES program, implements state programs to protect both surface waters and groundwater from animal feeding operations. The State would like to develop training materials, and possibly sessions, for state program staff on nutrient management planning and implementation. The training will likely include elements of nutrient management planning, including required elements of plans, what to look for when reviewing a plan, and what to assess during inspections or site visits. In the interest of optimizing costs, the contractor, in consultation with the WACOR, Region and NMED should consider delivery of some materials and sessions electronically. However, EPA will consider in-person training, should it be determined to be a cost-effective way to deliver some elements of the training program. Initial planning will be initiated during this Option Period. Most effort, including any training delivery, will occur in the next Option Period. For the duration of this project, the contractor shall also consider how elements of this training program may be transferred or applied in other States and Regions.

**Deliverables and Schedule:** The WACOR will schedule a kick-off call with NMED and Region 6. The contractor will work with this group to develop the curriculum and outline a schedule for implementation. By the end of this Option Period, a reasonably robust curriculum and schedule shall be outlined to inform work in the next Option Period. Work on development of some initial modules or curriculum pieces may also begin during this Option Period, but will be continued into the next Option Period. For purposes of work plan development, the contractor shall assume that any training delivery, such as webinars or in-person sessions, will not occur until the next Option Period.

**Task 3. Developing Idaho CAFO General Permit Record-Keeping and Reporting Forms** [No additional LOE]

The objective of this task is to complete a Google Forms record-keeping and reporting application to accompany the soon-to-be reissued CAFO general permit for the State of Idaho, currently in development by EPA Region 10. The forms will facilitate ease of data input on the farm or ranch during regular inspections or activities, with a function to provide the necessary summary data for annual reports, which can then be submitted to the permitting authority electronically. Raw data will be electronically storable and retrievable by individual operators, and not uploaded to any networks or made available to agencies or the public electronically. The contractor, with facilitation by the Region 10 CAFO coordinator/ag advisor, will consult with producers in the scoping stage and for beta-testing, in order to ensure that the product is as user-friendly as possible. In addition, the contractor will work with EPA to ensure development of a product that aligns as closely as possible with CAFO reporting requirements under the e-Reporting Rule and with the elements of the Idaho CAFO general permit.

**Deliverables and Schedule:** This work is in progress and the schedule is paced by development of the general permit and feed-back from the producer group. The final produce will be a series of Google Forms that covers all of the record-keeping and reporting requirements of the Idaho CAFO general permit, and shall be timed to coincide with public notice and finalization of the permit.

**Task 4. Providing Logistical Support for Animal Ag Partnership Projects and Events** [Additional 15 hours LOE]

Under this task the contractor will provide logistical support for The Animal Ag Discussion Group and other ag partnerships. AADG is an informal group of animal agriculture stakeholders including representatives from the U.S. Department of Agriculture (USDA), all sectors of the animal feeding industry and their associations, academia, and states. The group convenes via meetings and calls, as well as on farms and at agricultural events around the country, to keep lines of communication open and develop a shared understanding of how to achieve viable agriculture and clean water.

<https://www.epa.gov/npdes/animal-feeding-operations-afos-animal-agriculture-industry-partnerships>

During this option period the contractor will likely begin planning efforts to organize the Fall 2018 AADG meeting, though that meeting will not occur until the next option period. The contractor may also assist EPA Regional Coordinators in convening Regional partnership forums, as web-based or small in-person meetings. The contractor may: provide support for written materials such as meeting agendas or summaries, organize meeting venues or web conferencing; and other related tasks as communicated through technical direction by the WACOR. Other ag partners and partnerships that may fall under this task include ACWA, States and Tribes, nutrient technology partners, and ag industry groups.

**Deliverables and Schedule:** Deliverables and schedules will be specified with technical direction and schedules developed with the contractor on a case-by-case basis. For purposes of work plan development for the remainder of this Option Period, assume no more than 15 hours LOE; this will involve initial



discussions with EPA about planning the Fall 2018 AADG meeting, and initial logistical efforts to secure a venue, hotel blocks and related activities. Primary activity will under this task will occur during the next Option Period.

**Task 5. Supporting Technology and Innovation Collaborative Activities** [Additional 15 hours LOE]

EPA collaborates with a range of agricultural stakeholders, including USDA, producers, integrators, industry trade associations, and environmental organizations, to identify and support innovative technologies and practices that can promote:

- Water quality and other environmental benefits
- Productive agriculture
- Enhanced manure management
- Beneficial recycling and reuse of manure
- Cost savings for producers

One example of such collaborative work is the Nutrient Recycling Challenge, which EPA launched in 2015 to accelerate development and use of technologies that can recover nitrogen and phosphorus from animal manure and generate value-added products. To build on the successes of the Challenge, EPA will continue to collaborate with technology developers and agricultural stakeholders to support development of new technologies and practices. Support may include activities and events focused around technology evaluation, technology demonstrations, connecting technology developers to end-users, identifying funding sources, and general education and outreach.

**Deliverables and Schedule:** EPA anticipates that most of the work under this task will not be initiated until the next Option Period. However, during the remainder of this Option Period, some initial scoping efforts may commence. For purposes of work plan development assume no more than 15 hours LOE to include mostly discussions with EPA and partners for some initial planning of next steps.

**Task 6. Supporting Region 5 in Ohio Authorization Process** [No additional LOE]

The state of Ohio is currently going through the formal authorization process of having the NPDES CAFO program and stormwater from agricultural operations transition from Ohio EPA to Ohio Department of Agriculture (ODA). This includes numerous reviews and cross-walks to assess ODA rules and program for conformance with the federal rules. It will also require public notice and comment, as well as the likelihood of public hearings. The contractor shall provide support to EPA Region 5 for certain aspects of this process, such as assessing ODA rules and program description for conformance with the e-reporting rule, compilation of public comments, drafting responses to comments, logistical support for public hearings, and other tasks associated with any U.S. EPA action on Ohio's request to transfer. The contractor will not be undertaking inherent government functions, e.g., determining whether or not Ohio regulations meet the federal requirements, but will provide support to EPA's determinations. The contractor will not be involved in all elements of the review, but will provide support as EPA determines that there is a need.

**Deliverables and Schedule:** The WACOR will schedule a 3-way call with the contractor and Region 5 to discuss schedule and specific deliverables. Deliverables may evolve as the authorization process moves forward. The contractor will be expected to be responsive to quick turn-arounds as well as longer term objectives. If the authorization process is not completed by June 2018, some specific tasks may be extended into the next Option Period if resources are available.

**Task 7. Supporting Development of NPDES CAFO Permits issued by EPA** [Additional 20 hours LOE]

Preventing and eliminating EPA permit backlogs is a high priority for EPA. Though there are few EPA backlogged CAFO permits at this time, there may be elements of certain reissuance processes where contractor assistance would expedite finalization of a permit. EPA may or may not utilize this task during the remainder of this Option Period. Tasks will be permit-specific, and will be identified as EPA Regions identify permits for which they could use assistance.

**Deliverables and Schedule:** As/if permits are identified, the WACOR will set up kick-off call(s) with the relevant Regional permitting staff. Specific tasks will be identified at that time. For purposes of work plan development, assume approximately 20 hours LOE for the remainder of this work period. Resources not utilized during this Option Period will be utilized during the next Option Period.

### **PART III. ADAPTATION AND RESILIENCE TOOLS**

**Task 8. Developing a Permit Writer's Step-by-Step Decision and Instruction Guide for Estimating Critical Flow Statistics Using Available Tools** [No additional LOE]

There are a number of new and refined tools, as well as a progression of methods, for estimating critical flow statistics, which is an important element of developing NPDES water quality based effluent limits (WQBELs). Tools and approaches include:

1. *SWToolbox*: computes statistics at individual stream gages.
2. *WREG*: uses output from *SWToolbox* for stream gages throughout a region to compute regression equations for estimation of statistics at ungaged locations.
3. *StreamStats*: provides already developed results from *SWToolbox* and *WREG*.

These tools provide powerful new ways to improve accuracy of estimated critical flows at streams throughout the U.S. However, for the typical permit writer, how to use the tools, as well as understanding which tool or combination of tools is most appropriate for given situations, will be facilitated by some practical guidance.

Under this task the contractor will develop user-friendly, relatively simple step-by-step guidance to inform decision-making, as well as how to use these tools. The guidance will not replace, nor be as detailed as, the relevant User Manuals. However, this guide will be customized for the scenarios encountered by NPDES permit writers and will guide them through the decision-making process, (*e.g., the discharge is five-miles downstream from a gage, though there are no tributaries, diversions or land-use changes in between; what should I do?*). The guide will also provide basic instructions on how to use the tools.

**Deliverables and Schedule:** The contractor shall provide an outline of the proposed guidance, with suggestions for level of details, organizational features, etc. to meet the criteria articulated above, within 2 weeks of receiving technical direction from the WACOR to initiate the project. This outline shall also be accompanied by a proposed schedule for development of the guidance; the schedule shall include adequate time frames for necessary reviews. The task will include working with USGS and/or their contractors in order to accurately represent the tools and their uses. The contractor will also consult with several State and/or Regional permit writers in order to develop guidance that will meet their needs. The WACOR will make the necessary introductions and contacts.



#### **Task 9. Providing Thermal Tools Training and Support** [Additional 10 hours LOE]

The contractor shall support thermal permit reviews and training for EPA Regional programs. This may include thermal modeling or mixing zone assessments for state or EPA permits, training of State and/or EPA permit writers in the use of CORMIX or other models, or other aspects of developing thermal limits.

**Deliverables and Schedule:** The WACOR will set up calls with specific Regions to kick-off specific projects, as EPA Regional needs are identified. Projects may be focused on development of one or more permit, or may be broader training on particular aspects of developing thermal limits. For the purpose of work plan development, the contractor shall assume no travel and no contractor conferencing facilities, i.e., any training will be via web conferencing using EPA conferencing services. Timing on this task is TBD. For purposes of work plan development assume no more than 10 hours LOE this Option Period, with the bulk of the effort to occur in the following Option Period.

### **PART IV. AQUACULTURE**

#### **Task 10. Characterizing Shellfish Production Systems** [Additional 20 hours LOE]

Historically, in-situ production systems of shellfish such as oysters and clams did not add food, nutrients, pesticides, pharmaceuticals or other materials that would result in the introduction of pollutants to waters of the U.S., and thus were not required to have NPDES permit coverage. However, in more recent years, some shellfish operations have begun utilizing pesticides or other substances, which can result in discharges of unutilized substances or residues that are considered pollutants. EPA has a poor understanding of how frequently, and under what circumstances, this is happening. Under this task the contractor will undertake an evaluation of shellfish production systems in U.S. waters to characterize the types of introduced materials/substances used in shellfish production, how wide-spread these practices may be, and any documented water quality effects.

**Deliverables and Schedule:** Within 4 weeks of receiving technical direction from the WACOR to commence this task, the contractor will provide an outline of the deliverable (EPA is flexible about the format) that considers categories such as freshwater, marine; east coast, west coast; class of shellfish (oyster, clam, etc.); and other aspects of types of production systems that will aid EPA in making determinations about whether there are subsets of shellfish production systems that may be point source discharges of pollutants. Following review of the outline, EPA and the contractor will collectively decide the amount of time necessary to undertake an adequate assessment of inputs to the various types of shellfish production systems that may result in point source discharges of pollutants to waters of the U.S. The assessment will include the necessary information to determine not just whether these systems are technically point sources, but also any data that may demonstrate if they are posing threats to water quality, e.g., nutrient enrichment, impacts to native benthos, etc. As this information unfolds EPA may focus the task in a particular area or direction for additional investigation or follow-up. Note: if EPA Regional need for permitting assistance exceeds current expectations, the WACOR may allocate resources currently reserved for this Task to Task 12.

#### **Task 11. Assessing Monitoring Requirements in Aquaculture Permits** [Additional 10 hours LOE]

The National Association of Aquaculture (NAA) has expressed an interest in establishing criteria for and a process by which operators of NPDES-permitted aquatic animal production facilities (AAPFs) may qualify for reduced monitoring. NAA's interest is based on expenditure of resources, so frequency of monitoring is the primary factor, though analytical costs for certain pollutants could also be relevant. EPA has agreed to work with NAA on this issue, while stressing that the majority of NPDES permits are issued

by authorized States, and those programs have the decision-making authority on monitoring requirements. Under this task the contractor will first undertake a nation-wide assessment of current monitoring requirements in aquaculture permits issued by EPA and authorized States. EPA will provide downloads from ISIS for the contractor to use in the assessment. For state programs that have not included adequate information in ISIS to facilitate the assessment, and that EPA determines is important to the analysis, the contractor may need to obtain information from state data systems, or review a representative set permits issued by certain states (this will not be more than 2 or 3 states). The assessment will summarize monitoring frequencies (e.g., weekly, monthly, quarterly), and analytes; attempt to conclude whether there are patterns in these variables with respect to the type of production system; the type or status (e.g., impaired) of the waterbody to which the system discharges; or are state-specific. Any other information that might inform decisions about appropriate monitoring frequencies should also be included in the assessment. After the assessment, EPA will include NAA representatives in discussions about possible alternative monitoring strategies that still provide robust accountability for discharge quality. As appropriate, the contractor will support those discussions and include relevant options in follow-up elements of this project. The project will also include consultation with EPA Regional and possibly some state permitting programs.

**Deliverables and Schedule:** Within 3 weeks of EPA providing technical direction to initiate this task, the contractor shall provide the initial assessment per the description of step 1, above. This assessment should take no more than approximately 10 hours LOE, and should provide adequate summary statistics on monitoring frequencies for the various types of aquaculture operations, with some discussion of influencing factors, e.g., water body status, state requirement, etc. At this initial juncture, EPA and the contractor will also determine if additional analysis is needed and when and how to include NAA representatives in discussion of possible alternative monitoring strategies. Final product(s) and schedules will be determined, based on the results of the assessment and discussions with relevant stakeholders such as regional and state NPDES permitting programs and permittees.

**Task 12. Supporting Development of NPDES Aquaculture Permits issued by EPA** [Additional 20 hours LOE]

Preventing and eliminating EPA permit backlogs is a high priority for EPA, and there may be elements of certain reissuance processes where contractor assistance would expedite finalization of a permit. EPA may or may not initiate work under this task during the remainder of this Option Period, depending on EPA Regional permit issuance schedules. Tasks will be permit-specific, and will be identified as EPA Regions identify permits for which they could use assistance. Permits that fall into this category will most likely include the following:

- a. EPA develops NPDES permits for off-shore aquaculture operations in federal waters. This process involves coordinated NEPA assessments with the Corps of Engineers and National Marine Fisheries Service, development of appropriate permit provisions per CWA §§ 402 and 403, fact sheet language, an administrative record, a biological evaluation per the Endangered Species Act, and response to comments. In the Gulf of Mexico, this also involves coordination with other federal agencies per the 2017 *MOU for Permitting Offshore Aquaculture Activities in Federal Waters of the Gulf of Mexico*. EPA Region 4 is currently developing permits for 2 proposed net pen/cage systems in the Gulf of Mexico, and EPA Region 9 is currently developing a permit for a proposed system off the coast of California. Under this task the contractor will provide targeted support to these permitting processes, for relevant tasks as determined by the Regional permit writers.
- b. EPA develops NPDES permits for fish hatcheries on tribal lands and in unauthorized states. This

process includes reasonable potential analysis, WQBEL development and other standard NPDES elements. Currently pending permits are mostly in Regions 1 (Massachusetts and New Hampshire) and 10 (Washington, Oregon and Alaska), though other permits may be identified during this Option Period. Under this task the contractor will provide targeted support to these permitting processes, for relevant tasks as determined by the Regional permit writers.

**Deliverables and Schedule:** As permits are identified, the WACOR will set up kick-off call(s) with the relevant Regional permitting staff. Specific tasks will be identified at that time. The contractor will support EPA Region 9 in development of the NPDES permit for Rose Canyon. The specific tasks include mixing zone analysis, and support for developing a biological opinion for ESA consultation. These tasks may or may not be invoked during this Option Period, depending on the pace of permit development. If not completed during this Option period, they will likely be continued in the work assignment for the next Option Period. The contractor may also assist Region 4 with discrete aspects of Gulf off-shore aquaculture permit issuance to be determined, and other Regions with discrete aspects of fish hatchery permit issuance. This task may be invoked to assist with additional efforts related to aquaculture permitting, if specific needs arise during the Option Period and adequate funds/LOE remain. For purposes of work plan development, assume approximately 20 hours LOE for the remainder of this Option Period, with additional work to occur during the next Option Period.

## **PART V. NPDES MESSAGING [Additional 25 hours LOE]**

### **Task 13. Finding and Compiling Relevant Data and Information on NPDES Program Outcomes**

The NPDES program is 4 decades old, and despite of the many advances and improvements in water quality during that time, quantifying water quality improvements resulting from the implementation of the NPDES program is challenging. In this task the contractor will help discover, compile and analyze data from a variety of sources to tell comprehensive ‘big picture’ environmental successes of the program, as well as more focused outcomes, such as state-specific case studies and sector specific improvements. This should include the successes of other implementers, such as POTW operators or stormwater managers, where the NPDES program may be an important driver, but should not overshadow important accomplishments of other entities. The complementary aspect of all efforts should be clear. In addition, Information that highlights the ongoing challenges, and hence the continued relevance of the program, should be included. The contractor will work with ACWA and state programs, with EPA Regions and headquarters and their available data sets, and will also seek other ways to highlight and tell NPDES success stories, e.g., linking reductions in CSOs to fewer beach closures, as supported by data. The research should feed into 3 general formats: 1-page fact sheets that highlight certain elements of the NPDES program; state-focused success stories or case studies; an NPDES program Esri StoryMap that can cohesively discuss the general successes of the program, and will likely incorporate elements of the other two products. EPA may produce these products, or may use the contractor to produce them, but in either case the contractor is responsible for finding and analyzing the necessary information to produce these products. Final products should be useful to EPA and State NPDES programs, general and technical audiences, and should try to express successes in terms that will be relevant to general audiences, such as human health, aquatic biota recovery, recreational uses, etc. Important ancillary benefits should also be considered, such as water and energy efficiency, greening urban environments and flood management. Other indicators, such as economy or jobs, may also be included where they can be documented and supported. Also consider the multiple roles States and EPA play in building local capacity, including funding, technical support and organizational/management development. All materials should be composed within the context of how permitting accomplishes these benefits and why the public should have confidence in the organizations carrying out the work. EPA anticipates that the scope and direction of this project will evolve as some ideas and directions prove to be fruitful and others do not.

**Deliverables and Schedule:** Within 10 days of receiving technical direction from the WACOR to initiate this task, the contractor shall provide a schedule that includes both long- and short-term deliverables. The short-term deliverable should include 1 state success story and 1 program area (e.g., CSOs, pretreatment, stormwater – this can be the contractor’s choice) outcome that EPA can use as examples at the national NPDES branch chief meeting the week of May 22, 2018. The WACOR will facilitate state involvement via ACWA and EPA Regional involvement, and the contractor will undertake the necessary follow-up with individual state programs identified via ACWA and Regional outreach. The WACOR will facilitate involvement of all national program subject matter experts for exploration of specific program areas, and the contractor will undertake the necessary follow-up with those SMEs. The schedule and content areas will evolve based on areas in which data and case studies are discovered. The contractor and EPA will communicate regularly during this evolution. EPA expects that the long-term schedule for this project will continue into Option Period 2 of the contract, but would like to have some solid products by late summer/early autumn 2018 to circulate to EPA managers and state NPDES programs for feed-back.

#### **Quality Assurance Statement:**

Most of the tasks in this work assignment are being carried forward from the WA 1-17, Amendment #1, and are already included in the project QAPP, as applicable. New project Tasks 7, 9, 12 and 13 may include the analysis of existing, but do not involve the generation of new data. Therefore, some simple QAPP elements will be required.

A quality assurance project plan (QAPP) is not required for new or revised Tasks 4, 5 and 10 because they do not involve the generation, management, distribution, or use of environmental data that will be used or have the potential for use in environmental decision making. EPA requires that all environmental data used in decision making be supported by an approved Quality Assurance Project Plan (QAPP). The contractor shall submit the QAPP within 15 days of the submittal of the work plan, or agreement between the WACO and contractor on the relevant Task strategy, as relevant.

#### **Level of Effort:**

The EPA estimated level of effort for this work assignment is an additional 180 hours. In the event existing, revised or new tasks encounter unexpected delays, some of this effort may carry forward into the next Option Period.

#### **Other Requirements:**

##### Reporting

Reports shall be submitted in accordance with the reporting requirements of the contract. In addition, the contractor shall maintain bi-weekly telephone contact with the EPA work assignment manager (WACOR) to provide updates on progress and problems. All documents shall be delivered in the word processing format compatible with EPA, HTML, and/or PDF format, as requested by the WACOR. The contractor shall notify the WACOR immediately when expenditures of 75% and 90% of the work assignment LOE or funding (including pipeline costs) are reached.

The contractor shall be prepared to submit for inspection copies of all work in progress any time as requested by the WACOR. The contractor shall not release information or comments on works performed under this work assignment without the WACOR’s prior written authorization. Wherever practicable, all written materials submitted to EPA must be doubled-sided and on recycled paper. All computer disks submitted to the WACOR shall be scanned for, and identified as free from viruses.

The contractor shall submit drafts and final products in hard copy as well as on CD in a format compatible with Water Permits Division hardware.

#### Travel

All non-local travel shall be authorized in advance by the EPA Project Officer and shall be in accordance with the contract. Travel for any single task should not exceed \$1,000 unless trip has been pre-approved.

#### Information Collection

All collection of information and data shall be in accordance with the Office of Water Quality Management Plan and OMB requirements under the Paperwork Reduction Act.

**No single event under this Work Assignment is anticipated to exceed \$20,000. The Contractor shall immediately notify the EPA Contracting Officer, CL-COR and WACOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.**

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 1-19			
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:			
Contract Number EP-C-16-003			Contract Period   07/01/2016   To   06/30/2018 Base                      Option Period Number    1			Title of Work Assignment/SF Site Name WIFIA Engineering Support			
Contractor EASTERN RESEARCH GROUP, INC.				Specify Section and paragraph of Contract SOW See PWS					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   08/18/2017   To   06/30/2018			
Comments:									
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund									
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.									
SFO <input type="checkbox"/> (Max 2)									
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)  (Cents)	Site/Project (Max 8)	Cost Org/Code
1									
2									
3									
4									
5									
Authorized Work Assignment Ceiling									
Contract Period:		Cost/Fee:			LOE:				
07/01/2016 To 06/30/2018									
This Action:									
Total:									
Work Plan / Cost Estimate Approvals									
Contractor WP Dated:				Cost/Fee		LOE:			
Cumulative Approved:				Cost/Fee		LOE:			
Work Assignment Manager Name   Alejandro Escobar  <div style="display: flex; justify-content: space-between; border-top: 1px solid black; margin-top: 10px;"> <span>(Signature)</span> <span>(Date)</span> </div>						Branch/Mail Code:			
						Phone Number: 202-564-9047			
						FAX Number:			
Project Officer Name   Tangela Cooper  <div style="display: flex; justify-content: space-between; border-top: 1px solid black; margin-top: 10px;"> <span>(Signature)</span> <span>(Date)</span> </div>						Branch/Mail Code:			
						Phone Number: 202-566-0369			
						FAX Number:			
Other Agency Official Name  <div style="display: flex; justify-content: space-between; border-top: 1px solid black; margin-top: 10px;"> <span>(Signature)</span> <span>(Date)</span> </div>						Branch/Mail Code:			
						Phone Number:			
						FAX Number:			
Contracting Official Name   Brad Heath  <div style="display: flex; justify-content: space-between; border-top: 1px solid black; margin-top: 10px;"> <span>(Signature)</span> <span>(Date)</span> </div>						Branch/Mail Code:			
						Phone Number: 513-487-2352			
						FAX Number:			

**Performance Work Statement  
Contract EP-C-16-003  
Work Assignment 1-19**

**Title:** WIFIA Engineering Support Services for the King County Georgetown Project

**Work Assignment Contracting Officer's Representative (WACOR):**

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**Alternate Work Assignment Contracting Officer's Representative (AWACOR):**

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**Period of Performance:** August 18, 2017 through June 30, 2018

**Estimated Level of Effort (LOE):** 272 Hours

**Quality Assurance:** The requirements do not include environmental measurements, etc., therefore a supplement programmatic quality assurance project plan (PQAPP) is not required.

**Background:** EPA administers the WIFIA program, which provides secured (direct) loans and loan guarantees for water and wastewater infrastructure projects. The WIFIA statute was enacted as Title V of the Water Resources Reform and Development Act (WRRDA) of 2014 (33 U.S.C. 3901-3914). Through WIFIA, EPA can loan up to 49 percent of the cost of water and wastewater infrastructure projects. The program is designed to provide loans for the development of water and wastewater infrastructure.

EPA has designed a two-phased application process to obtain WIFIA credit assistance. Interested parties wishing to apply for WIFIA credit assistance have completed and submitted a letter of interest to be considered for federal credit assistance. EPA evaluates the letters of interest against program objectives and for creditworthiness and invited



selected interested parties to submit applications. The purpose of the application is to ensure that the applicant and project(s) are creditworthy, to calculate the amount of budget authority that will be needed to fund the project(s), and to examine the technical feasibility of the project(s). The application process is structured in a similar way to the letter of interest, but requires submission of more detailed project material and supporting documents. The application materials and additional program information are available at <https://www.epa.gov/wifia>

**Objective:** The objective of this work assignment is to provide engineering support services to the EPA, Office of Water (OW), Office of Wastewater Management (OWM), Water Infrastructure Division (WID) in the technical and engineering aspects of underwriting, structuring, negotiating, and, if appropriate, closing a loan with the WIFIA program for the Georgetown Wet Weather Treatment Station (GWWTs) in King County, WA. The contractor shall provide the level of effort, material, equipment, and facilities necessary to support the tasks listed in this performance work statement (PWS). For each of the following tasks, EPA will make LOI and application materials available.

For all tasks, the contractor shall provide all source files and content to EPA with final deliverables. For each of the following tasks, the contractor shall be responsible for coordinating certain activities with other EPA offices or other organizations outside of EPA. When the contractor is responsible for coordinating activities with EPA or other outside organizations, the contractor should be certain to communicate that they are working as an EPA Contractor. The contractor must be familiar with EPA's Office of Public Affairs guidelines, standards, best practices, technical requirements for Web site design and publications and all deliverables should comply with those requirements.

## **Tasks**

The contractor shall perform the following tasks:

### **Task 1: Work Plan and Funds Tracking and Management**

*Task 1.1 Work Plan* – The contractor shall prepare a detailed work plan and budget for the accomplishment of the indicated tasks in accordance with the Work Assignment clause (EPAAR 1552.211-74). The work plan shall include a description of: (a) proposed staff; (b) an estimate of hours to be spent on each task by each staff person (prime and subcontractors); and (c) a list of deliverables, with due dates and schedule for deliverables. The contractor shall meet with the WACOR to review the work plan. Based on feedback provided by the WACOR at the meeting and written comments, the contractor shall update the work plan.

*Task 1.2 Funds Tracking and Management* – This task also includes monthly progress and financial reports which shall conform to the requirements particularized to the clause, F.2 REPORTS OF WORK (EPAAR 1552.211-70). The budget for this work assignment shall be tracked at the task level. The contractor shall meet with the WACOR and/or the Alternate WACOR either in person or via telephone approximately two hours per month



to discuss work assignment planning issues. The contractor shall also maintain a milestone chart or other tracking system for projects underway as part of this WA.

## **Task 2: Due Diligence Support**

*Task 2.1 General Support.* The contractor shall provide ongoing support to the WIFIA program during the application review process in meetings with prospective borrowers and/or related to projects, including responding to specific requests for analytical support and review of any applicant submissions.

*Task 2.2 Assessment of Technical Design and Review of Construction Plans.* The Contractor shall provide an assessment of the completeness of the design for the construction and full-scale operation of projects, review design assumptions, and verify that the design is correct and that there are no major errors. Verify that the proposed project addresses the need identified in the application.

*Task 2.3 Assessment of Construction Cost Estimate.* The Contractor shall provide an assessment of the cost estimation methodology and the construction cost information, construction budgets, bid tabulation, or any other cost estimates. Review shall include explicit evaluation of the inclusion of federal cross-cutter requirements and reasonableness of contingency estimates.

*Task 2.4 Assessment of Construction Schedule.* The Contractor shall review project development and construction schedules; including the critical path schedule, and provide an assessment of the reasonableness of the schedule and the achievability. Identify pending actions (e.g., permits, resolutions, documents) that have the potential to delay the implementation of the project on time and within budget.

*Task 2.5 Review Operation and Maintenance Plans.* The Contractor shall review adequacy of operation and maintenance (O&M) plans to confirm that the expected useful life of the project can be attained. Review shall include an assessment of the variable and fixed operating cost estimates, capital expenditures, and maintenance programs.

*Task 2.6 Identify Risks and Possible Mitigation Strategies.* The Contractor shall identify key engineering and operational risks of the technology proposed in a project, and discuss potential mitigation measures. Work with EPA to develop terms and conditions related to mitigation of technical risk. These may include performance or contingency requirements, reserve amounts, periodic audits, major maintenance schedules/reserves, etc.

*Task 2.7 Draft and Final Independent Engineer's Memorandum.* The Contractor shall provide EPA with a draft Independent Engineer's Memorandum that presents conclusions of the reviews conducted, identifying any issues raised by the review. The Contractor shall finalize the Engineer's Memorandum after receiving comments from the WACOR.

### **Deliverable Schedule (by tasks/subtask and due date)**

All activities shall begin based on WACOR direction unless otherwise noted. Due dates for draft documents are identified in the tables below. The contractor shall discuss any disagreements with or questions on EPA-provided comments prior to submission of a final document. All deliverable revisions will be due back to the WACOR no later than ten (10) business days after the contractor receives EPA feedback unless otherwise specified by the WACOR. If EPA chooses not to provide comments, the draft document will be accepted as final, and the contractor will be notified that no revisions are required.

Documents prepared under this contract shall be provided in electronic format, compatible with the MS Office Suite. All documents shall be provided first as drafts. EPA may provide comments for the contractor to incorporate into the final documents. The final document format will be agreed upon by the WACOR and the contractor in advance. The contractor shall also provide electronic copies of any data files developed in the course of this Work Assignment.

#### **Task 1 – Work Plan, Funds Tracking and Work Assignment Management**

<i><b>Subtask</b></i>	<i><b>Deliverable</b></i>	<i><b>Draft Due Date</b></i>
1.1	Work Plan	Per contract requirements
1.2	Funds Tracking and WA Management	Monthly per contract requirements

#### **Task 2 - Design Standards Screening and Research**

<i><b>Subtask</b></i>	<i><b>Deliverable</b></i>	<i><b>Due Date</b></i>
2.1	Responses to specific requests	As directed by the WACOR
2.2	Technical Assessment	3 weeks from receipt of project materials
2.3	Cost estimate assessment	3 weeks from receipt of project cost estimate
2.4	Construction Schedule assessment	3 weeks from receipt of project schedule
2.5	O&M plan assessment	3 weeks from receipt of O&M plan
2.6	Risk mitigation strategies	3 weeks from receipt of project materials

<i><b>Subtask</b></i>	<i><b>Deliverable</b></i>	<i><b>Due Date</b></i>
2.7	Draft independent engineer's memorandum	4 weeks from receipt of project materials
2.7	Final independent engineer's memorandum	As directed by the WACOR

### **Other Requirements**

**Software Applications and Accessibility:** Files delivered to the Government shall be Microsoft Office 2013 or higher. All software and electronic information technology shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov>.

- Preferred text format: MS Word,
- Preferred presentation format: Power Point
- Preferred graphics format: Each graphic is an individual JPEG or GIF file
- Preferred portable format: Adobe Acrobat, Version X
- Preferred tracking format: MS project or excel

**Travel:** Only local travel is expected for this work assignment and will be limited to two meetings at EPA Headquarters in Washington D.C. Any travel chargeable to this work assignment shall be allowable only in accordance with the limitation of FAR 31.205-43 and FAR 31.205-46, and must be approved by the Contract Level Contracting Officer Representative (CL-COR) prior to travel taking place. The WACOR will provide at least a two week notice of any non-local travel.

**Release of Data and Information:** All information collected and developed under this Agreement is the property of the U.S. EPA and shall not be released to the public or used for other work or projects, including EPA or other federal work, without written authorization of the Contracting Officer. Information from this task shall be included in the program database (Salesforce), as appropriate. Updates to the database shall include communications with Stakeholders such as e-mails and meeting summaries.

**Conference/Meeting Guidelines and Limitations:** All appropriate clearances and approvals required by Agency policy in support of any and all conference related activities and expenses, including support of meetings, conferences, training events, award ceremonies and receptions, including the form 5170 for all meetings costing more than \$20,000, shall be obtained by the EPA Contract Level COR as needed and provided to the Contracting Officer (CO). Work under conference related activities and expenses shall not occur until this approval is obtained and provided by the EPA Contract Level COR. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official

business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

**Contractor identification:** Contractor personnel shall always identify themselves as Contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative. The Contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the Work Assignment Contracting Officer Representative.

**Technical Direction:** The WACOR or an authorized individual is permitted to provide technical direction. Technical direction must be within the statement of work of the contract and includes: (1) Direction to the contractor which assists the contractor in accomplishing the Statement of Work, (2) Comments on and approval of reports or other deliverables. Technical direction will be issued in writing or confirmed in writing within five (5) calendar days after verbal issuance. One copy of the technical direction memorandum will be forwarded to the Contracting Officer and CL-COR.

**Management Controls:** All printing shall be in accordance with clause H.2 (Printing) of the contract.

**Conflict of Interest:** Under this work assignment, the EPA is employing its conflict requirements on a transactional basis provided the contractor and/or subcontractors maintains strict confidentiality and a firewall to guard against communications within the contractor on matters that the contractor is working on for the EPA. In order to prevent organizational conflicts of interest from arising during the period of performance, the contractor will be required to adhere to the following conflict of interest limitations if the contractor and/or subcontractor assisted in the preparation of a particular WIFIA application, or in the analyses or other information used to support that application, or if the contractor otherwise represents a WIFIA applicant or borrower with respect to a particular application or transaction before the Agency, the contractor and/or subcontractor will not be eligible to provide engineering services to EPA with respect to that particular application or transaction and personnel identified in the work assignment shall not be involved in the preparation of WIFIA applications, or in the analyses or other information used to support WIFIA applications. Nor shall they advise, directly or indirectly, others within the contractor's organization on the preparation of WIFIA applications, or on the analyses or other information used to support WIFIA applications, or on any WIFIA-related transactions. In addition, they shall not represent any applicant or borrower seeking assistance from a specific EPA Credit program described herein. Personnel may provide program information that is publicly available, such as the WIFIA statute, its implementing regulations, the WIFIA program guide and other information that has been disclosed to the public, to other personnel or applicants.

**Quality Assurance Surveillance Plan:** All tasks are to be completed on or ahead of schedule unless EPA and the contractor mutually agree to a schedule change.

The contract level QASP applies to this work assignment. The requirements do not include environmental measurements, etc., therefore a supplement programmatic quality assurance project plan (PQAPP) is not required.